DOCUMENT RESUME

ED 112 006 CE 004 753

AUTHOR	Burhoe, Steven A.
TITLE	Household Pets: Care, Feeding and Occupational Opportunities.
INSTITUTION	Virginia Polytechnic Inst. and State Univ., Blacksburg. Div. of Vocational-Technical Education.
SPONS AGENCY	Virginia State Dept. of Education, Richmond. Agricultural Education Service.
REPORT NO	Agdex-470
PUB DATE	75
NOTE	68p.
EDRS PRICE	MF-$0.76 HC-$3.32 Plus Postage
DESCRIPTORS	*Animal Caretakers; *Career Opportunities; *Curriculum Guides; *Occupational Information; Resource Guides; Secondary Education; Vocational Agriculture
IDENTIFIERS	*Household Pets

ABSTRACT

The publication is designed for teachers of agriculture as a guide in developing teaching plans for a unit on the care and feeding of household pets and on occupations in this area. A local situation appropriate to the unit, teacher objectives, an introduction, and group objectives are briefly developed for the unit. For the topics of feeding and caring for dogs, feeding and caring for cats, sources of information on other household pets, and identifying occupational opportunities in pet care, the guide includes sections on problems and concerns of students, a list of references for teacher and student use, suggested visual aids and other equipment, ideas for special events and activities, and a few possible activities for application and evaluation. A detailed content summary for each section, intended for teacher use, condenses material from the references and relates to the problems and concerns presented. A section on identifying sources of information on other household pets lists specific references, including source and content, for each item. The subject of understanding pet care is briefly described. (MS)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED112006

HOUSEHOLD PETS
Care, Feeding and Occupational Opportunities

Curriculum Materials
for
Agricultural Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Prepared by Steven A. Burhoe

Agricultural Education Program
Division of Vocational and Technical Education
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061

In Cooperation with

Agricultural Education Service
Division of Vocational Education
State Department of Education
Richmond, Virginia 23216

1975

CE 004 753

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
How To Use This Outline	1
Problem Area I: Understanding Pet Care	4
Problem Area II: Feeding and Caring for Cats	4
A. What is the history of the cat?	7
B. What are the major breeds of cats used as household pets?	7
C. How do you select a cat for the household?	10
D. How do you housebreak a cat?	11
E. What are different ways to feed a cat, what should be fed, how much and how often should the cat be fed?	11
F. What accessories are needed with cats?	12
G. Should a cat be bred? If so, when?	13
H. What needs to be done when the queen is pregnant, when the kittens are born, and for the next 2 to 3 days after birth?	14
I. How are the kittens weaned?	15
J. What are some tips on grooming cats?	15
K. What are the major diseases and parasites of cats?	15
Problem Area III: Feeding and Caring for Dogs?	19
A. What is the history of the dog?	22
B. What are the major breeds of dogs used as household pets?	23
C. What are the six breed groupings?	24
D. How is a dog selected for the household?	25
E. How can a dog be housebroken?	25
F. How should a dog be fed?	26
G. What accessories are needed with dogs?	29
H. To mate or not to mate, is this an important question?	30
I. What needs to be done when the bitch is pregnant, and when the puppies are born?	32
J. How are puppies weaned?	33
K. What are some tips for grooming dogs?	33
L. What are some tips for training dogs?	34
M. What are the major diseases and parasites of dogs?	35
N. What are some symptoms that indicate the dog is sick?	35
Problem Area IV: Sources of Information on Other Household Pets	37
A. The Hamster	37
B. The Guinea Pig or Cavy	38
C. The Rabbit	38
D. The Rat	39
E. Materials on Pocket Pets	39
F. General Pet Booklets	40
G. Animal Gestation Chart	40

H. Normal Physiological Data of Animals 40
I. Care of Reptiles in Captivity 40
J. Raising Laboratory Animals and other Small Stock 41
K. Clinicare Dietary Animal Foods 41

Problem Area V: Identifying Occupational Opportunities in Household Pet Care 43
A. What pet care occupations are available in the area of animal care? 44
B. What qualification requirements need to be met in the area of animal care for successful job completion? 46
C. What pet care occupations are available in the area of cropping, animal farming, gardening, and related work? 51
D. What qualification requirements need to be met in the area of cropping, animal farming, gardening, and related work for successful job completion? 52
E. What pet care occupations are available in the area of medical, veterinary, and related work? 55
F. What qualification requirements need to be met in the area of medical, veterinary, and related work for successful job completion? 56
G. What are some pet care occupations not found in the above areas? 59

ACKNOWLEDGEMENTS

Appreciation is expressed to Julian M. Campbell, State Supervisor of Agricultural Education, State Department of Education, Richmond, Virginia, for sponsoring this curriculum outline; to James P. Clouse, Professor and Head of Agricultural Education, for his help in the preparation of this outline; and to Jasper S. Lee, Associate Professor, for his guidance and direction in the preparation of this outline.

A Virginia Polytechnic Institute
and State University Publication

How to Use This Outline

This publication contains a teaching outline for the occupations in, and the care and feeding of household pets (primarily dogs and cats). It is for use by teachers of agriculture as a guide in developing teaching plans. The various sections of the outline are intended to be used as follows:

SITUATION. The teacher will need to develop the local situation as appropriate to the unit, considering such things as student concern with the unit, prior instruction related to the unit, student background, importance of the unit in the community, and occupations for which a knowledge of the content is important.

TEACHER OBJECTIVES. These are for teacher use only. They indicate the abilities the teacher expects the students to develop as a result of studying the unit.

INTRODUCTION. This section provides for introducing the unit, helping students recognize the problems as their own, giving the teacher an indication of what the students already know, stimulating the interest of students in the content, setting the stage for establishing student objectives and problems, and providing the students an opportunity to describe their experiences related to the content areas. These things may be accomplished through discussions, use of visual aids, use of field trips, or some other way. The introduction should supply the students with one or more reasons for studying the unit. A good introduction helps to motivate student learning.

GROUP OBJECTIVES. These are the students' reasons for studying the unit and should be developed with the group. Students should express why they should be knowledgeable concerning the unit. The objectives listed in the outline are anticipated student responses and objectives are listed in somewhat general terms. Student objectives may be more specific according to their desires or needs. Developing the group objectives also should be motivating to the students.

PROBLEM AREAS. Because of its size, the unit is divided into problem areas for detailed analysis and study. From this point on in teaching, content treatment should be for one problem area at a time.

PROBLEMS AND CONCERNS OF STUDENTS. This section reflects things the students should know about each problem area in order to accomplish their objectives. They should be drawn from the group. The teaching outline contains a list of problems students would be likely to suggest.

After the problems have been listed, the teacher should lead the students in a discussion of each problem, taking the problems one at a time or in logical groups. He should find out what the students know, conduct supervised study on the items they do not know or use some other teaching technique for helping students secure needed information. These teaching techniques may include use of resource persons, lectures, panel discussions, field trips, and/or visual aids. He should then lead the students in a discussion for the purpose of drawing conclusions appropriate to the local situation and to supervised agricultural occupation experience programs.

REFERENCES. A suggested list of references is included for each problem area. Some of these are for teacher use and some for student use. This is not a complete list and the teacher should use all available references in studying this unit.

VISUAL AIDS AND OTHER EQUIPMENT. The outline contains a list of suggested visual aids and other equipment for use in studying each problem area.

SPECIAL EVENTS AND ACTIVITIES. These are suggested special events and activities. Those used should be planned well in advance.

APPLICATION AND EVALUATION. Included are a few suggestions for occupational experience activities and testing. The teacher may wish to give examinations for the unit rather than for each problem area.

CONTENT SUMMARY. This section is for use only by the teacher. It is related to the "problems and concerns" sections and contains a summary of the material in the references. It is not intended to be all inclusive. The teacher will need to supplement this material when teaching the unit.

Teaching Outline

Enterprise: Veterinary Science

Unit: Care, Feeding and Occupational Opportunities of Household Pets (Primarily dogs and cats)

Problem Areas:

I. Understanding Pet Care
II. Feeding and Caring for Cats
III. Feeding and Caring for Dogs
IV. Identifying Sources of Information on other Household Pets
V. Identifying Occupational Opportunities in Pet Care

Situation: . . . . .
(local)

Teacher Objectives for the Unit:

The learner is to develop the ability:

A. to relate the problems found in pet care.
B. to determine the needs of cats in a household.
C. to determine the needs of dogs in a household.
D. to properly care for a dog or cat.
E. to properly feed a dog or cat.
F. to seek out information on his/her household pet.
G. to recognize and appreciate the occupational opportunities available in the caring of household pets field.

Introduction for the Unit:

A. Discussion questions
1. Do you have a pet? How do you care for your pet?
2. Do dogs and cats need good nutrition like you and I?
3. How can you tell when your pet is sick?
4. For what occupations would you need the knowledge and abilities you would develop by learning to feed and care for your household pet?

B. Bring into the classroom several different pets, or pictures of pets, and discuss their differences, and the different occupations in the care and feeding of household pets.

C. Have a veterinarian or pet doctor come to class and explain the general areas of pet care.

Group Objectives for the Unit (develop with the group):

By the end of the lesson, the student will be able to:

A. identify the problems in pet care.
B. feed cats properly.
C. feed dogs properly.
D. care for dogs and cats while young.
E. care for dogs and cats while pregnant and giving birth.

F. compile a list of information resources on dogs and cats.
G. discover the diversity of the pet industry.
H. explore the different occupations in pet care.

Problem Area I: Understanding Pet Care

Today in the United States there is a "pet explosion." There are approximately 83 million cats and about 50 million dogs in the country at this time. These animals have cost the taxpayers $65 million dollars over recent years. A better awareness of cats and dogs could help curb the problem. The neutering of males and females is one answer to the problem.

On the better side, the pet industry is a growing billion dollar operation offering jobs in many diversified areas. The problem appears to be that school systems in the country are slow to react to needs of this industry. True, there are some outstanding programs, but in most of the schools, a program is nonexistent.

Pets in this country are better fed than most humans. Their rations are scientifically determined for the best possible, nutritionally balanced food.

Just looking around the community can give an idea of the diversity of the pet industry: veterinarians; pet shops; sales outlets for many different types of dog and cat food; pet suppliers (leashes, collars, beds); kennels; dog breeders; dog showmen; dog trainers; and the list can go on and on. Have your class discover some on their own or discuss possible occupations in class.

Problem Area II: Feeding and Caring for Cats.

Problems and Concerns of Students in the Problem Area (develop with the group):

Suggested lead question: What do we need to know about feeding and caring for cats in order to accomplish our objectives?

A. What is the history of the cat?
B. What are the major breeds of cats used as household pets?
C. How do you select a cat for the household?
D. How do you housebreak a cat?
E. What are different ways to feed a cat, what should be fed it, how much, and how often should the cat be fed?
F. What accessories are needed with cats?
G. Should a cat be bred? If so, when?
H. What needs to be done when the queen is pregnant, and when the kittens are born?
I. How are the kittens weaned?
J. What are some tips on grooming cats?
K. What are the major diseases and parasites of cats?

References:

Thatcher, William, Windsor-Richards, A. Caring for Your Cat. ARCO Publishing Co., Inc., 219 Park Avenue South, New York, N. Y. 10003, #2378 H, $1.95.

Pond, Grace. The ARCO Book of Cats. ARCO Publishing Co., Inc. 219 Park Avenue South, New York, N. Y. 10003, #2078 C, $4.95.

Raymond, John. Cats and Kittens. ARCO Publishing Co., Inc. 219 Park Avenue South, New York, N. Y. 10003, #2597 C, $5.95.

Coast Fisheries, Division of Quaker Oats Company, Your Cat and You, Their Care, Feeding and Training. Chicago 54, Illinois.

Purina Cat Care Center. Handbook of Cat Care. Ralston Purina Co., Checkerboard Square, St. Louis, Missouri, 63188 1972.

Whitney, Leon F. The Complete Book of Cat Care. The Interstate Printers and Publishers, Inc. Danville, Illinois 61832. $5.95.

Selection and Care of Common Household Pets, Agriculture Information Bulletin No. 332, United States Department of Agriculture, Washington, D. C. 20250.

Controlling Fleas, Home and Gardens Bulletin 121, USDA, Washington, D. C. 20250.

Carnation Company, Friskies Pet Foods Division, Care and Feeding of Your Cat, How to Photograph Your Pet, and My Cat's Health Record. 5045 Wilshire Boulevard, Los Angeles, California 90036.

Pitman-Moore, Inc. For Feline Lovers Only. Fort Washington, Pa. 19034.

Lowe's, Inc. Caring For Your Cat. North Edward Street, Cassopolis, Michigan 49031.

Fox, Michael W. Understanding Your Cat. Coward, McCann and Geoghegan, 200 Madison Avenue, New York, N. Y. 10025, 1974.

Ames, Felicia. The Cat You Care For. 8th Edition, The New American Library, Inc., 1301 Avenue of the Americas, New York, N. Y. 10019 or The Carnation Company, 5045 Wilshire Boulevard, Los Angeles, California 90036.

Gaines Dog Research Center. "Guide to America's Cats," send to Gaines Cat Chart, P. O. Box 1007, Kankakee, Illinois 60901. $1.25 rolled, $.50 folded.

Visual Aids and Other Equipment:

A. Chalkboard

B. Overhead projector, opaque projector, and screen

C. Slides

D. Feline Anatomy, by Client Education Series, Elanco Products, Elanco Products Company, A Division of Eli Lilly and Company, Indianapolis, Indiana.

E. Gaines Guide to America's Cats, 128B, Gaines Cat Chart, P. O. Box 1007, Kankakee, Illinois 60901.

F. "Cat Fact Sheet #2," Available through Veterinary Extension, VPI&SU, Blacksburg, Virginia 24061.

G. "Workbook on Small Animals-Cats," Cooperative Extension Service, The Ohio State University 4-H Circular 218, 2120 Fyffe Road, Columbus, Ohio 43210.

H. Films Available

1. Carnation Company, all others that follow are 16mm, sound and color. Postage charged one way. Address requests to: Modern Talking Pictures, 1145 North McCaddan Place, Los Angeles, California 90038.

   a. "Feeding for Health," 28 min.

   b. "Acatemy Awards," 13 min. 30 sec.

   c. "Cool Cat Caper," 4 min. 50 sec.

2. Kal Kan Foods, Inc. Contact: Modern Talking Film Services, 1145 North McCadden Place, Los Angeles, California 90038.

   a. "The Guardian Angels," 16 mm color, 30 min.

I. Additional Information Sources

1. Pet Food Institute. Basics of Cat and Kitten Care. 111 East Wacker Drive, Chicago, Illinois 60601.

2. Calo Pet Foods. Love Your Cat. Division of Borden Foods, Borden, Inc., P. O. Box 23605, Oakland, California 94623.

3. Geisler Pet Products. Pet Care Book. 1848 Webster Avenue, New York, N. Y. 10057.

4. Kal Kan Foods, Inc. Pet Care Brochures. 3363 East 45th Street, Los Angeles, California 90058.

Special Events and Activities:

A. Attend a pet show

B. Visit a veterinary hospital

Application and Evaluation:

A. Have each student conduct a study on the cat breed of their choice, discovering the history, color markings, and other interesting facts about the cat.

B. As a group, plan a pet show and develop a set of criteria for judging.

C. As a group, develop a list of diseases, their symptoms and treatment to be distributed in the school.

Content Summary (for use by the teacher):

A. What is the history of the Cat?

Scientists theorize that a long extinct animal, the Miacis (pronounced My-a-kiss) a small tree-living animal, was the ancestor of the cat. The Miacis lived 40 to 50 million years ago and had a long body, an even longer tail and short legs. Like a cat, he probably had retractable claws.

The cat was the center of a religious cult in ancient Egypt, persecuted as a companion of witches in medieval times, and beloved for it's ability to kill rats when the plagues came.

It was not until white settlers arrived from Europe, bringing along with them their domesticated cats, that cats were kept as pets in North America. Colonists, like their European cousins, found cats helpful in controlling rats and mice both on the farms and in the towns.

(Used by special permission of the Ralston Purina Company)

B. What are the major breeds of cats used as household pets?

Four breeds will be discussed and additional breeds will be listed with a source of information if deeper investigation is anticipated.

1. Persian

This most popular of the longhairs looks somewhat like a miniature lion with his mane across the neck and back and his ears set apart atop his head. The Persian's glossy fur fluffs up all over his body, including his tail or "brush."

The Persian has a massive head, short back, short snub nose, small ears, short tail and large paws. His broad chested body is set rather low on sturdy legs, giving an impression of strength and solidity.

Today there are three divisions of color common to the Persian cat: 1) the solid color in blue, black, red, cream or white; 2) the patched to tabby patterns in many colors; and 3) the silver color called so because of the shimmer of their highly translucent hair which changes shading with light or movement.

There are a few breeders who specialize in distinct types. Cat show catalogues list Blue-eyed Whites, Silver Tabbies, Smokes, Blacks, Red Tabbies, and Tortoiseshells.

The show standard calls for a powerfully build cobby animal with large eyes and a short face and nose. They are much like with long-haired cat like the Angora.

Color choice is wide, but you will notice that aside from all-white cats, there is only one type among those in any breed standard which shows white -- the tortoise and white. At cat shows you never see black and white, blue and white, or tabby and white cats.

(Printed with the permission of the Ralston Purina Company)

2. Siamese

a. Seal Point Siamese

The Siamese is very active, inquisitive, and is a great "talker." These cats have a light body color and darker points (mask, ears, legs, feet, and tail). The Seal Point has a very short, finely textured coat of pale fawn or cream color. All the points are the same shade, a deep seal brown. Brilliant blue eyes present a striking contrast. The Siamese has a finely muscled, dainty body, with hind legs slightly longer than the front.

b. Blue Point Siamese

The wedge-shaped head, the large ears, pricked forward, and almond shaped, oriental eyes are characteristic traits. The Blue Point has a glacial white coat shaded into a beautiful platinum, with grey-blue points. As with other varieties, eyes are a brilliant blue, with matching nose leather and paw pads.

(Courtesy of Gaines Dog Research Center)

3. The Domestic Short-Haired Cat

a. Silver Tabby

The most common breed of household pet the American shorthair is recognized in 20 different varieties of color and markings. Full grown cats are medium to large sized and are powerfully built. A short strong neck, broad head and cheeks and full chest add to this cat's strong appearance. A stud will have especially well developed jowls. The cat has a thickish tail which is carried almost level with the back. The coat is of short, thick, even hairs. The Silver Tabby has either green, hazel, or lemon colored eyes.

(Courtesy of Gaines Dog Research Center)

b. Brown Tabby

Credited with being the earliest domesticated cat in history. The word tabby has come to denote any American shorthair of various colors, but a true tabby cat is banded and varied with black. The brown tabby has luminous orange eyes, which are very round and set wide apart.

(Courtesy of Gaines Dog Research Center)

c. Calico

Black, red and/or cream colored patches cover the head, back, sides, and tail of the Calico American Shorthair, with an orange patch on one side of the face. The mottled coat should not be streaked in any way. The nose, throat, legs, and belly are white. Eyes are copper colored or deep orange.

(Courtesy of Gaines Dog Research Center)

4. Abyssinian

This cat is presumed to be the oldest known pure pedigreed cat. The body hairs are of two or three different bands of color, giving the cat a "ticked" coat. The coat is usually ruddy brown with dark brown or black tickings and is thick, but silky soft and with a lustrous sheen. The large, broad-based ears are tipped with brown or black. Eyes are almond shaped and are gold, green, or hazel in color. The Abyssinian has a medium long body, lithe and graceful, but which shows well developed muscular strength.

(Courtesy of Gaines Dog Research Center)

Other important breeds:	Sources of further information:
5. Angora	Ralston Purina, Interstate
6. Himalayan	Ralston Purina
7. Maine Coon Cat	Ralston Purina, Interstate
8. Korat	Ralston Purina
9. Burmese	Ralston Purina, Interstate, Gaines
10. Russian Blue	Ralston Purina, Interstate, Gaines
11. Manx	Ralston Purina, Interstate, Gaines
12. Black Rex	Ralston Purina, Gaines
13. Havanna Brown	Ralston Purina, Gaines

C. How do you select a cat for the household?

When selecting a cat for the home, it is well to consider the following points:

1. For what purpose do you want it? An adult cat would be better if you wanted a working cat or do not have the time to train a kitten. If you want a grown cat that is more responsive to you, start with a kitten.

2. Do you want a male or female? In this case you must consider numerous factors. The easiest to see is do you want kittens? If you still prefer a female but not kittens you can have them "altered" so they cannot reproduce. Males are generally more friendly and can also be altered (neutered) to keep them home more by reducing their sex drive.

3. Is the cat for around the house or to show? The difference here is the cost of your cat. Cats can be registered or not registered depending on your intent. Registered cats are generally more expensive and if shown, more time and care is required.

4. Are you starting with a kitten? If you are, you must consider that the kitten is very fragile and needs to be handled with care. Make sure that the kitten you select has been naturally weaned and is at least 8 weeks old. Keep it warm and let it explore the new surroundings. Kittens need to be fed often becuase of their high level of activity and small stomachs.

D. How do you housebreak a cat?

Cats need to be housebroken because of the offensive odor that develops as a result of cat feces not being disposed of regularly. Cats are one of the easiest animals to housebreak because it is their nature to stay clean. Kittens can be easily housebroken by placing a pan of absorbent material in a quiet spot known by the cat and place him in it when he needs to urinate or eliminate his feces. Materials that are often used include sand, dirt, sawdust, paper, clay, or a commercial cat litter. The latter is the best because it absorbs the odors as well as the moisture. As part of the training you should place the cat in the box after eating, after playing, first thing in the morning and the last thing at night. The box must be emptied and cleaned often or the cat will not use the box. Housebreaking can be accomplished in two or three days. Never punish the cat for soiling furniture because his memory span is too short. Clean and deodorize the spot instead so he will not return thinking it is the right spot to eliminate his waste.

E. What are different ways to feed a cat, what should be fed, how much and how often should the cat be fed?

Cats, like humans, are omnivorous. They eat meat but need vegetables, also, to have a balanced meal. Cats need a high protein, high-fat diet for good growth. If you want to be sure your cat is getting good nutrition, buy a commercial cat food. Companies have been testing and improving their products until they meet or exceed the needs of each cat. There are four major divisions of commercial cat food available:

1. Dry cat food that contains about 30 percent protein, 8 percent fat, and 9-10 percent moisture. For adult cats, feed 1 to 1½ ounces twice a day.

2. Speciality cat food, in the little flat cans, usually contain from 10 percent to 23 percent protein, 2 percent to 6 percent fat, and about 75 percent moisture. Vitamins and minerals are added to balance the nutrition. Adult cats should be fed 2½ to 4 ounces of the food twice a day.

3. Maintenance cat food, in the tall cans, usually contains about 10 percent protein, at least 2 percent fat, and about 75 percent moisture. Servings are the same as in #2.

4. Soft-Moist cat food, this is the pouch packaged food. Normally containing at least 27 percent protein, 7 percent fat, and 30 to 34 percent of moisture. One packet provides one feeding for the adult cat. Feed twice a day, two packets needed.

(Printed with permission of Ralston Purina Cat Care Center)

Some do nots about feeding your cat. Do not feed your cat table scraps, he may like them but they lack the balanced nutrition he needs, and bones from the table scraps can be hazardous. Do not feed him the same things every day. He wants variety; give it to him. Some foods can be toxic if given often. Liver can cause Vitamin A toxicity, raw egg white can destroy the vitamin biotin, and raw fish can cause a deficiency of the vitamin Thiamine.

When feeding a cat, always have a dish or bowl of fresh, clean water available. It is very important, and you must remember that milk is not a substitute for water, milk is a food. Regularity is another good point, the cat should be fed at the same times each day, or else the irregularity will affect the cat in a detrimental way.

Kittens must be considered separately from adult cats. For six to eight week old kittens, a mixture of warm milk and a little regular cat food will serve as a good starter meal. Then gradually reduce the milk and increase the cat food until the kitten is eating only the cat food. This takes about two weeks. Kittens need a different eating schedule, too. They should be fed four times a day, instead of two, because of their small stomachs.

F. What accessories are needed with cats?

Cats are creatures of comfort. They like to be warm and cozy, in other words, they like to stay in the house.

If the cat is to stay in the house, the following are some things which may be needed:

Litter pan(s) and absorbent litter
Collar and identification tag
Toys
Food and water bowls
Scratching post
Grooming aids
Food
First aid needs (bandages, antiseptic, gauze)
Bed

These items are suggested if the cat spends most of his time indoors. The litter pan, food and water bowls, food, and scratching post would be considered essential. The bed could be a purchased fancy one, or just a box lined with something warm and CLEAN. If the bed does not stay clean he may choose to sleep elsewhere.

G. Should a cat be bred? If so, when?

In the United States today there are approximately 33 million cats that are either in animal shelters or abandoned. This leads to a cost of $65,000,000 to the taxpayers. If a household has a female cat, it is likely that one day there will be a litter of kittens. This household has the responsibility of keeping, giving away or otherwise disposing of the kittens. There is a quick, painless, inexpensive operation than can eliminate the birth of unwanted kittens. In males it is known as neutering or castrating. A neutered male remains gentle, reliable, and free of odor after the operation. He also strays less from home in search of females. The same result is achieved when females are spayed. After the operation, the female will be incapable of producing offspring. If someone feels that motherhood is a great moment in a cat's life, they are wrong. A cats pregnancy, delivery, and nursing are very painful to the mother and she would be better off never to have kittens.

Planned parenthood applies to cats also. Cat breeders obviously do not want a neutered or spayed animal because of their inability to produce offspring. For proper breeding, the following physiological data must be considered:

Factor	Technical Terminology
1. Age to puberty	6--15 months
2. Breeding season	2--3 times a year; mostly from June to August
3. Estrous cycle	Polyestrus, seasonal, induced ovulation
4. Length of sexual cycle	Irregular, from 15 days to several months
5. Duration of heat	About 4 days in presence of male, 10 days otherwise
6. Ovulation	Induced by copulation, both ovaries 24--36 hours post copulation
7. Time of copulation	Around third day of the estrous cycle
8. Fertilization time	Occurs 2 days after copulation
9. Gestation period	52--69 days, average 63 days
10. Weaning age	Depends on breed, 5--9 weeks

11.	Beginning of new estrous	About 2 - 3 weeks after weaning
12.	Breeding life	Female 4 years, male 5 years

(Printed with the permission of VPI&SU Veterinary Science Department)

Proper planning is the key so the breeder can be prepared for each breeding season and each birth time.

H. What needs to be done when the queen is pregnant, when the kittens are born, and for the next 2 to 3 days after birth?

For the first 8 of the 9 weeks of pregnancy, the female (queen) should be allowed to move about normally. The only changes in the normal routine would be to increase her amount of food, giving her warm milk and increase her intake of vitamins and iron. During the early part of pregnancy, immunization records should be checked to see if the cat has been innoculated against distemper and rabies. This should be done because temporary resistance is passed on through her milk to the kittens. The last week will be the time when the female will be looking for a nest. Provide a nest for her, an empty box lined with old towels will be sufficient if it is located in a warm, dark place in the house.

Labor follows the same pattern as in other animals:

1. Restlessness
2. Vaginal discharge
3. Stomach dropping
4. Labor pains
5. Panting
6. Excessive water consumption

But, if labor continues for 18 - 24 hours without results, a veterinarian should be consulted.

The size of a litter could range from one to six kittens with an average of about three. When the kittens start to emerge their normal position would be head first with legs alongside, sometimes they will be breeched, meaning they are born rear first. Watch the birth carefully, only assisting in an emergency; the mother cat knows what she's doing. Watch and make sure the cat passes a placenta after each kitten, she will eat all afterbirth, and clears the membrane around the kitten. If the newborn kitten has trouble breathing hold his legs, invert him, and tap on his back to clear his lungs and throat. Then be sure to disinfect the navel cord.

After the kittens are born make sure they all nurse. The first milk of the mother is the richest in antibodies and nutrients so it is important that all the kittens get some. Give the weaker kittens extra milk and vitamins so they can catch up to the others. Do not worry about their eyes being closed, they will open in about 10 days.

I. How are the kittens weaned?

At about 3 to 4 weeks of age, the kittens will begin to develop their first set of teeth (milk teeth). When the teeth come in they can begin eating small amounts of cat food mixed with warm, evaporated milk. By the time they are 7 to 8 weeks old they will be able to eat all their meals away from the mother cat. At this time you also need to gear down the mother, she has been eating heavily to feed the kittens. After weaning, cut her ration to about ½ of the normal ration then gradually increase it keeping a careful watch on the mother to see if her udders have dried and her weight has remained normal.

J. What are some tips on grooming cats?

Brushing is broken into two categories: long hair and short hair. The long hair breeds need to be brushed twice a day with a steel comb so they will not shed on your furniture and the brushing will also stimulate hair follicles, and give the cat a sleaker look. The short hair breeds need to be brushed only once a day with a long bristled brush for the same reasons as the long hair.

Bathing should be restricted to times of emergency, unless it is a pedigreed show cat. Bathing removes the protective oils on the skin and opens the cat to a cold. If the cat must be bathed, use warm water and a cat shampoo in a draft free room, wash quickly, and dry thoroughly. Dry shampoos work well on cats also.

Clipping the cats nails is a temperamental point. If your cat stays outside most of the time nature will clip the nails for you. If your cat stays indoors clip the nails according to directions given by your veterinarian. The closest the cut should be is within 1/8 of an inch from the blood vessel of the nail.

K. What are the major diseases and parasites of cats?

When your cat is sick he may develop some of these symptoms:

" Dull, rough coat, with excessive shedding
Listless, sleepiness
Bad breath odor
Loss of appetite

Red, watery eyes
Vomiting, coughing, sneezing
Body swelling, lumps increasing in size"
Carnation Company, reprinted with permission of copyright owner from The Cat You Care For, by Felicia Ames, The New American Library, Inc., 1968.

The most common ailments are ones that can be avoided by proper care and a watchful eye.

Infectious Enteritis

It has been called feline distemper and is almost always fatal. The symptoms appear quickly and violently. This disease is almost incurable. The best way to combat it is to immunize when the kitten is six to nine weeks old.
Carnation Company

Rabies

Cats are as susceptible to rabies as other animals but should be vaccinated early. Rabies comes in three stages. The first stage will be only a slight change in the temperament, the cat will isolate itself and display snapping behavior. The second stage is much more noticable. The eyes and voice will change, the cat will make strange movements, and the muscles will show signs of paralysis. The third stage is an advancement of the second; total paralysis, loss of voice, and the tongue hanging dryly from the mouth. The total process results in death in four to six days.

Pneumonitis

This is a severe disease of the upper respiratory tract. The symptoms are a high fever (normal temperature is 101.5°F.), sneezing, runny eyes, wheezing, and drooling. The disease can be combated with antibiotics, but the best method of fighting the disease is to vaccinate against it annually. If your cat has it be careful because pneumonitis is very contagious to humans.
Carnation Company.

Feline Infectious Anemia

It is caused by a microscopic parasite attacking the red blood cells thus causing anemia. Its symptoms are fever, depression, loss of appetite, emaciation, and possibly jaundice. It attacks cats from one to three years old and is of much higher frequency in males than in females. It can be treated by using steriods, antibiotics and blood transfusion but over 50 percent of all cats that contract it still die. It possibly is carried by fleas.
Carnation Company.

Hairballs

This condition is common because cats are continually cleaning themselves and swallowing the hair. The hairball can cause constipation and stomach or intestinal disorders. So they should be removed either through surgery for a large hairball or by giving the cat milk of magnesia or another constipation remedy.
Carnation Company.

Internal Parasites

The four most common internal parasites found in cats are: 1) the hookworm; 2) the tapeworm; 3) the roundworm; and 4) the whipworm.

Hookworms are about half an inch long and attach themselves to the wall of the intestine and suck blood.

Tapeworms are transferred by fleas, rodents, and other wild animals that have eaten the eggs of the tapeworm. Some symptoms of tapeworms are: 1) the cat will drag his rear end on the floor; and 2) the cat will lose his body condition becoming weaker and thinner.

Roundworms cause the cat to be listless. Diarrhea or constipation, a pot belly and loss of weight are additional symptoms of the disorder. Coughing spells and fever are symptoms that the roundworms are far advanced.

Whipworms will irritate the cat when they first enter the intestines. Possible indication of whipworms is blood or mucus in the stools.
Ralston Purina, reprinted with permission of copyright owner from Handbook of Dog Care.

The best way to combat these parasites is to maintain high sanitary conditions.

General symptoms of a cat's having any type of worms include a dull coat, inflamed eyes, coughing and vomiting. Another would be if the cat eats excessively but does not grow.

Treatment of worms is simple and recovery for the cat is fast if done properly. Consult your veterinarian if problems arise.

External Parasites

"Fleas are small, hard shelled, very active insects that live on cats and other animals. They feed on blood and cause local discomfort, causing the cat to scratch. Fleas are also notorious for carrying diseases. There

are many good powders, sprays and collars available that can help combat fleas, but be sure to de-flea your cat outdoors to keep dead fleas off the floors. If fleas are found, spray flea killer throughout the house for several days to eliminate the fleas that escaped, and their eggs.
Ralston Purina.

Flea powder will also eliminate lice.
Ralston Purina.

Ticks are eight-legged hard-shelled arachnids, similar to spiders, which burrow their head into a cat's skin and feed on his blood. Irritation and infection are the main concerns as well as a chance of anemia due to blood loss. Ask your veterinarian what would be the best way to remove the ticks.

Ear mites are little insects that burrow into the ears of cats causing great irritation. The cat will scratch his ears and shake his head frequently. If you think your cat has ear mites, consult your veterinarian because the final result could be ear infection and deafness.

Skin Diseases

Mange is characterized by excessive shedding and baldness. It is caused by mites burrowing into the skin killing and cutting the hair. The veterinarian has effective treatments if the problem is diagnosed early.

Ringworms appear as oval bare patches on the cats starting in the head region. It can be treated with iodine but if it persists call the veterinarian.
Ralston Purina.

Eczema is often caused by a hormonal imbalance or an allergy on the part of the cat to something in his diet or environment. It appears as intense itching accompanied by falling hair, a dry, scaly skin, and sometimes open sores. Consult your veterinarian for treatment.

Problem Area III: Feeding and Caring for Dogs

Problems and Concerns of Students in the Problem Area (develop with the group):

Suggested lead question: What do we need to know about feeding and caring for dogs in order to accomplish our objectives?

A. What is the history of the dog?

B. What are the major breeds of dogs used as household pets?

C. What are the six breed groupings?

D. How is a dog selected for the household?

E. How can a dog be housebroken?

F. How should a dog be fed?

G. What accessories are needed with dogs?

H. To mate or not to mate, is this an important question?

I. What needs to be done when the bitch is pregnant, and when the puppies are born?

J. How are puppies weaned?

K. What are some tips for grooming dogs?

L. What are some tips for training dogs?

M. What are the major diseases and parasites of dogs?

N. What are the symptoms of a sick dog?

References:

Ames, Felicia, The Dog You Care For. New American Library, Inc., 1301 Avenue of the Americas, New York, New York 10019, 1968. $1.25.

Gaines Dog Research Center, Basic Guide to Canine Nutrition, Third Edition. 250 North Street, White Plains, New York 10625. $3.50.

Purina Dog Care Center, Handbook of Dog Care. Ralston Purina Co., Checkerboard Square, St. Louis, Missouri 63188.

Bartos, Bob, Dogs, Kennels & Profits. Friskies Division, Carnation Company, 5045 Wilshire Boulevard, Los Angeles, California 90036, 1972. $1.95.

Whitney, Leon F. The Complete Book of Dog Care. The Interstate Printers and Publishers, Inc. Danville, Illinois 61832. $5.95.

American Kennel Club. The Complete Dog Book. Garden City Books, Garden City, New York, 1961. $3.95.

Bartos, Bob. All About Puppies. Friskies Division, Carnation Company, 5045 Wilshire Boulevard, Los Angeles, California 90036, 1972. $1.25.

Agway Country Foods. Big Red Dog Care and Training. Division of Agway, Inc. Box 1333, Syracuse, New York 13201.

Gaines Dog Research Center. "Guide to America's Dogs," send to Gaines Dog Chart, P. O. Box 1007, Kankakee, Illinois 60901. $1.25 rolled, $.50 folded.

Weatherwax, Rudd. The Lassie Method. Western Publishing Company, Inc. 1971.

Carnation Company, "Training Your Dog," "Care and Feeding of Puppies," "Care and Feeding of Your Dog," "Care of the Older Dog," "My Dog's Health Record," Friskies, Box 730E, Pico Rivera, California 90665.

Gaines Dog Research Center, "Care of the Brood Bitch and Puppies," "Dog Owners Guide to Grooming," "Feeding Your Dog Right," "How to Succeed in House-training Puppies and Dogs," "What Every Good Dog Should Know," "Training the Hunting Dog," "First Aid for Dogs," "The Distemper Story," "All About A Dog Show," "How to Control Worms in Dogs," "Building and Managing a Kennel," Gaines Dog Research Center, 250 Park Avenue, New York, New York 10017.

Ken-L-Products Division, "Training Can Be Fun (and useful too!)," The Quaker Oats Company, Ken-L-Ration, Dept. T, Box 1800, Chicago, Illinois, 1955.

Pitman-Moore, "Puppies Grow Up to be Dogs," Pitman-Moore, Inc., Fort Washington, Pennsylvania 19034.

Visual Aids and Other Equipment:

A. Chalkboard

B. Opaque projector and screen

C. Slides

D. Canine Anatomy, by Client Education Service, Elanco Products, Elanco Products Company, A Division of Eli Lilly and Company, Indianapolis, Indiana.

E. Gaines Guide to America's Dogs, Gaines Cat Chart, P. O. Box 1007, Kankakee, Illinois 60901.

F. "Dog Fact Sheet #1," Available through Veterinary Extension, VPI & SU, Blacksburg, Virginia 24061.

G. "Nutritional Requirements of Dogs," National Research Council. Available through Veterinary Extension, VPI & SU, Blacksburg, Virginia 24061.

H. Youth Oriented Publications

1. "You and Your Dog," Ralston Purina Company.

2. "Dog Obedience Training Lesson for Beginners, Graduate Beginners, Novice, Graduate Novice, Open Class, Brave and Team," by Dennis A. Hartman, Cornell University, Guide M-4-16. $.25.

3. "Grooming and Handling Dogs," by Dennis A. Hartman, Cornell University, Guide M-4-22. $.25.

4. "Kindergarten Puppy Training," Michigan State University Bulletin 341 B.

5. "Leader's Guide For 4-H Dog Care and Training," Michigan State University, Bulletin 341.

6. "Selection, Feeding, Breeding, and Housing of Dogs," by Dennis A. Hartman, Cornell University, Guide M-4-24.

I. Films Available

1. Carnation Company, all titles that follow are 16mm, sound and color. Postage charged one way. Address requests to: Modern Talking Pictures, 1145 North McCadden Place, Los Angeles, California 90038.

a. "Feeding for Health," 28 minutes.
b. "What is a Dog," 13 minutes.
c. "There was Bingo," 4 minutes, 15 seconds.
d. "Dog Grooming," 6 minutes.

2. Gaines Dog Research Center, 250 North Street, White Plains, New York 10602. All titles are 16mm sound. Charge for postage both ways. Allow four weeks delivery time.

a. "Training You to Train Your Dog (Basic)," 30 minutes, color.
b. "Training You to Train Your Dog (Advanced)," 30 minutes, color.
c. "Westminster, 1960 (Dog Show)," 45 minutes, B & W.
d. "With Dog and Gun," 27 minutes, color.
e. "Speaking of Hounds," 27 minutes, color.

f. "Every Dog A Gentleman," 13 minutes, B & W.
g. "Second Sight," 13 minutes, B & W.
h. "Way of a Field Champion," 25 minutes, B & W.
i. "Internation Dog Show," 1964, 45 minutes, B & W.
j. "Managing a Whelping," 20 minutes, color.
k. "Cruft's Dog Show," 1966, 25 minutes, color.
l. "Way of a Show Dog," 25 minutes, color.

3. Ralston Purina Company, Purina Pet Care Center, Checkerboard Square, St. Louis, Missouri 63199. All 16 mm sound, color films. Charge for return postage and insurance. Allow three weeks for ordering films. Please provide three alternate dates for showing.

a. "Dogs Burn for Action," 28 minutes.
b. "Dog Etiquette," 30 minutes.
c. "Dog's Best Friend," 20 minutes.
d. "Tally-Ho!," 20 minutes.
e. "Beagles, Bassets and Bunnies," 15 minutes.
f. "National Fox Hunt," 30 minutes.
g. "Pointing Dogs Afield," 30 minutes.

J. Samples of canned and dry dog food

Special Events and Activities:

A. Attend a dog show.

B. Visit a veterinary hospital.

C. Visit a kennel and/or dog pound.

Application and Evaluation:

A. Have the class individually or in groups discover facts about the history, markings, and classes of dog breeds.

B. Visit a local dog pound and observe different breeds of dogs.

C. Working as a group, set up a training schedule for a dog and carry the schedule out using a local pet from the community or pound.

D. As a group, develop a list of common diseases of dogs including their symptoms and treatment.

Content Summary (for use by the teacher):

A. What is the history of the dog?

The dog has the same ancestor as the cat. The long-extinct Miacis, through evolution, evolved into the "canidae" or canine. The earliest mention of the dog, as we know it today, was in the Old Testament. In the course of the reference in the Bible to the

dog, the most definite were the ones mentioned with the Egyptians and Assyrians. The dogs in Egypt were used as pets and for hunting.

After importation to the United States, the dog went wherever man went and served as a watchdog, herd dog, pet, and hunting dog.

B. What are the major breeds of dogs used as household pets?

The American Kennel Club is the major source of information on the breeds of dogs in the United States. They publish a list of the most popular breeds of dogs in the United States according to its popularity. A short description of the top five breeds has been added.

1. Poodles - National Dog of France, actually descended from German Pudel-retriever and circus dog. Average weight 55 pounds, height 23 inches. Colors: solid black, white, silver, gray, apricot, brown.

   (Courtesy of Gaines Dog Research Center)

2. German Shepherd Dogs - Heroism in World War I began popularity in United States where renowned as guide and army dog. Average weight 75 pounds, height 25 inches. Coat dense. Color: black-and-tan or gray, various rich colors.

   (Courtesy of Gaines Dog Research Center)

3. Beagles - From England and long popular in America; hunter's favorite for rabbit and have two sizes: under 13 inches, weight 18 pounds; over 13 inches - 15 inches, 30 pounds. Short coat in white, black, tan; any hound color.

   (Courtesy of Gaines Dog Research Center)

4. Dachshunds - German name meaning "badger dog" for ancestors that fought the vicious badger underground. Highly popular as pet. Average weight 20 pounds, height 9 inches. Standard and miniature (under 10 pounds).

   (Courtesy of Gaines Dog Research Center)

5. Irish Setter - Bred in the Emerald Isle in the 18th century, brought to America in early 1870's. Average weight 60 pounds, height 25 inches. Coat: long, straight with fringes. Color: deep rich mahogany, chestnut, red.

   (Courtesy of Gaines Dog Research Center)

6. Miniature Schnauzer

7. St. Bernard
8. Laborador Retriever
9. Collie
10. Doberman Pinscher
11. Cocker Spaniels
12. Pekingese
13. Chihuahuas
14. Shetland Sheepdogs
15. Basset Hounds
16. Great Danes
17. Yorkshire Terriers
18. Pomeranians
19. Brittany Spaniels
20. Golden Retriever

C. What are the six breed groupings?

1. Sporting Dogs - There are three basic types of sporting dogs, divided according to their use. These are the pointing breeds, the spaniel or flushing breeds, and those used primarily for retrieving, often in the water. There are exceptions. For instance, the Brittany Spaniel is the world's only pointing spaniel. Irish and American Water Spaniels are used chiefly as retrievers. Examples: Pointer, English Setter, Cocker Spaniel, and Laborador Retriever.

2. Hound Breeds - The Hound Group is made up of two very different types of hound - the scent follower and the sight hunter or "sight hound." Examples: Scent - Beagle and Basset, Sight - Dachshund and Greyhound.

3. Working Dogs - As the term suggests, the dogs which make up this group were developed to labor for a living. They might pull milk cars, do police duty, carry messages, or gaurd and herd sheep, cattle or other animals. Examples: Boxer, German Shepherd, Collie, and Doberman Pinscher.

4. Terrier Dogs - In this group are generally those which go into the earth, "terra," after game. Their job was to go into holes that were too small for the larger hounds

and there do battle with and bring out the quarry. For centuries farmers have used them to keep down rats and vermin. Big-game hunters have relied on the larger terrier breeds to go in and finish off the quarry in close fighting. Their courage, ability and style have always won the admiration of dog lovers everywhere. Examples: Wire Fox Terrier, Schnauzer, Scottish Terrier, and Airedale.

5. Toy Dogs - The toy breeds can be described as those dogs weighing between 1½ and 18 pounds. Some Chihuahuas are as small as the former, and the latter is the top weight for the Pug. Because of their small size, the toy breeds are very popular as house pets and companions. They are very alert and make excellent watchdogs. Examples: Chihuahua, Pug, Pomeranian, and Pekingese.

6. Non-Sporting Dogs - This group is made up of a miscellaneous collection of breeds with a wide variety of characteristics, sizes and backgrounds. They may now be generally classified as companion dogs. Examples: Boston Terrier, Bulldog, Dalmatian, and Poodle.

D. How is a dog selected for the household?

The idea of selection is to chose a dog that will fit the owner's lifestyle. Some factors to consider when selecting a dog are: (1) size of living quarters; (2) number and age of children; (3) the way the people live; and (4) the owners temperament. For example, a person that lives in a city apartment should not select a Great Dane because there would not be a chance to exercise the dog properly.

If the owner selects a female, is he willing to keep any puppies she might deliver or keep her safe while she is in season? Consideration must also be given to the economic aspect, large dogs can consume ten pounds of feed a day. The most important point in selection is to buy the dog from an established breeder or pet dealer to be sure the dog is healthy.

E. How can a dog be housebroken?

Housebreaking a dog is an area of controversy between pet book authors. The general concensus seems to be to start training your dog when he is between four and six weeks old. Housebreaking a dog is an easy task, but the owner must first decide whether the dog is to be trained to urinate and defecate indoors or outdoors. A person who lives in a multi-floor apartment with a long way to get to the street or yard would, in most cases, paper train the dog indoors. Persons with easy access to the outdoors would probably choose the second method.

1. Paper or indoor training. This training method is simple and can be accomplished in a week. Dogs are naturally clean animals and generally will leave the bed to urinate and defecate.

When the owner sees the dog leave his bed and sniff around or squat, the owner should pick up the dog and place him on some paper placed near the dog's bed. After the dog has relieved himself, praise him for using the paper. Be sure to take the dog to the paper each morning after waking, after each meal, after hard play, and just before bedtime, this will help the dog to understand when he is to go to the papers to relieve himself. If the dog should soil elsewhere in the home, clean it up quickly and disinfect the spot thoroughly. Do not punish the dog unless he has been caught in the act. If he is scolded after the fact, his short memory will not see the relationship between the mess and the scolding. Once the dogs scent is on the paper, he will return to the paper knowing it is the right spot.

2. Outdoor training. Outdoor training follows several of the same principles found in paper training. When the puppy is of age or an older dog needs training, the first step is to take the dog outside in the morning, evening, after meals, and after play to urinate and defecate. After the dog is outside, a spot should be found to act as a training spot to take the dog to each time he comes outdoors. A marker for the dog could be a rag that cleaned up one of his accidents in the home. The rag would have his scent and he will return to it again and again. Eventually (about two to three weeks), when the dog has learned that he is to go outside to urinate or defecate, the dog will to to the door and wait or scratch if he needs to go out.

Remember that only a stern word is needed to punish the dog, never use physical punishment because it will cause the dog to be afraid of the owner whenever he approaches the animal.

F. How should a dog be fed?

Before feeding any animal, a person must consider what its requirements are for good nutrition. The nutritional requirements for a dog as stated by the National Research Council are:

Nutrient	National Research Council Recommendations* Percent
Dry Matter	28
Protein	6.7
Carbohydrate (maximum)	20
Fat	1.5
Fiber	NR
Ash	NR
Calcium	0.3
Phosphorus	0.24
Potassium	0.24
Sodium Chloride	0.43
Magnesium	0.014

Nutrient	Mg. Per Pound of Feed
Iron	7
Copper	1
Cobalt	0.3
Manganese	0.6
Zinc	0.6
Iodine	0.2
Vitamin A	600 IU
Vitamin D	40 IU
Vitamin E (Alpha Tocopherol)	6
Vitamin B-12	0.003
Folic Acid	0.02
Thiamine	0.1
Riboflavin	0.24
Pyridoxine (B-6)	0.12
Pantothenic Acid	0.3
Niacin	1.3
Choline	150

*Based on NRC Requirements of Dogs--Revised 1962--Table 1--"Nutrient Requirements of Dogs"

Another consideration is the stage of growth of the dog. Puppies need a feed that has a higher percentage of certain nutrients than full grown dogs (refer to the Puppy Chow commercial on television). Commercial feeds are readily available that fill the nutritional requirements of these animals. In addition, the information on requirements and foodstuffs that are used to fill these requirements are found on the can or package of every dog food product.

Dividing the dog group into two separate groups is the best way to present the feeding schedules and the amount of feed for each animal, as related to the age of the dog.

1. Puppies have special feeding requirements. They are:

   a. For puppies three to four weeks old, in addition to feeding by nursing, the puppies should be offered a gruel of one part water, milk or broth and one part puppy food, twice a day. Regulate the amounts at about 1 ounce per pound of body weight, because a puppie's eyes are often bigger than its stomach.

   b. For puppies five to seven weeks old, at this point the mother should begin weaning the pups. The amount of puppy food in the gruel should increase to two parts feed to one part water. The number of meals per day should also increase because the puppies are receiving less nourishment from their mother. The daily amount of feed will vary according to body weight. The rule of thumb is to feed 1 ounce per pound of body weight divided into two to three feedings a day.

c. For puppies seven weeks to three months of age and completely weaned, the amount of feed should be increased proportionately with the puppy's body weight and the number of feedings should also increase to three to four a day.

d. For puppies three to six months old, the number of feedings should decrease to three a day during this fast growing period. Do not be surprised if the pups double their weight during this period. Feed them so they have all they can eat.

e. For puppies six to twelve months old, the feedings per day can be dropped to two, because the puppy's stomach has a greater capacity and his growth rate is leveling out.

2. When feeding the adult dog, there are several areas to consider:

a. Do you want to feed dry or canned dog food? Dry dog food contains about 23 percent protein, seven percent fat, 24 percent carbohydrates, and about 10 percent water. This type of feed will deliver from 1,650 to 2,000 kilocalories per pound. It is balanced for all nutrients, and can be served dry, moist, or mixed with other foods.

Canned dog food contains about 10 percent protein, four percent fat, eight percent carbohydrates, and up to 75 percent water. This type will deliver from 650 to 700 calories per pound.

b. How much, and how often should the adult dog be fed? A good rule in feeding adult dogs is to feed one-half ounce of dry dog food per pound of dog per day. Adjustments must be made when serving canned dog food because it is about 75 percent water. So when feeding canned dog food, the amount should increase to one or one and one-half ounces per pound of dog per day.

An adult dog only needs to be fed once a day to satisfy his hunger. The best time to feed him is just before the owner's dinner time so the dog will not beg for food while the owner is eating.

c. If the owner decides to give a bone to his dog, should he first consider the type of bone he plans to give to the dog? Most bones are small and splinter easily when chewed by a dog. Large bones like shanks or knuckles are the best, with chicken and fish bones the least desirable bones. The bone does little to add to the nutrition of the dog, it only helps to clean the tartar off his teeth.

d. When feeding the pregnant dog, the bitch requires a small increase in food consumption. What needs to be watched carefully is the nutrient quality of the ration. The owner should use a quality tested feed that fills the nutritional needs of the bitch. After she has given birth, the bitch needs additional food to produce milk for her pups. When her pups are four weeks old, she will need about double her pregnant ration to continue producing enough milk for the litter.

e. When the puppies are to be weaned after about six weeks of nursing, be sure the pups are eating solid food. Cut the ration of the female according to the following schedule to help her dry her teats:

1st day	no food
2nd day	one-fifth her normal ration
3rd day	two-fifths her normal ration
4th day	three-fifths her normal ration
5th day	four-fifths her normal ration
6th day	she should be back on her pre-pregnant feeding schedule

f. When feeding field or working dogs, a special emphasis needs to be put on the amount of energy used by the animals. These dogs burn a tremendous amount of energy, so extra calories need to be added to their diet. A possible solution would be to add meat to the diet along with the regular dog food. This would help to increase the appetite and increase caloric intake. The addition of fats, such as lard, bacon grease or corn oil, will also increase the amount of energy consumed, raising the caloric intake.

g. The dog owner should stick to commercial dog food because of the problems that can occur by feeding the animal improperly. For example, milk, when given to an adult dog, can cause diarrhea, and raw eggs contain an enzyme that destroys the vitamin biotin.

G. What accessories are needed with dogs?

This equipment may vary according to the economic standing of the owner, the basic needs of the dog include:

1. Food pan
2. Water pan
3. Stiff brush
4. Comb
5. Collar - an inexpensive leather one for the puppy and a slip chain for the adult

6. Leash or lead

7. A grooming kit - clippers, scissors, etc.

For the more extravagant:

8. Coat

9. Boots

10. Curlers

For the hunting or working dog:

11. Penned area

12. Dog house and run.

All dogs need to be licensed if the law requires it. This will help avoid legal problems resulting from damages to property and find the dog if he gets lost.

H. To mate or not to mate, is this an important question?

Unless the owner is willing to take the responsibility for a litter of puppies, their birth should be prevented by not mating the female. This can be done by either spaying the female (make her unable to get eggs to the uterus) or watching carefully for the signs of estrus and then isolating the female for three weeks. The owner will know when the female is coming into heat by these signs: she will become restless; lose her appetite; and her vulva will become swollen. She will have a slight discharge or bleeding for four to seven days. After the discharge stops, she will be receptive to males for about a week. At this point she has been in heat for about two weeks.

If she is mated before the owner can confine her, a series of hormone injections have been developed to terminate the pregnancy. A veterinarian should be consulted for more information.

The male can be made incapable of breeding by having him neutered or castrated. This is a simple operation and can be helpful in reducing the dog population in a community.

On the other hand, a person with purebred dogs will most likely want to produce a litter. To do this efficiently, the breeder would need to be up to date on the physiology of the dog. Bob Bartos (1972) outlined the steps to take when a successful mating is desired.

1. The onset of heat needs to be detected by looking for the signs discussed earlier in this section.

2. After the first signs have passed, the female enters a period when she will accept a male.

3. Do not breed the female on the first day of acceptance because ovulation does not occur until later in this time period.

4. As ovulation occurs, the vagina becomes dilated and softer, and the vulva becomes soft and flabby. This best indicates when to breed the bitch successfully.

5. Another detection method for ovulation is testing for glucose secretions. When a section of Lilly's Testape analyzer is inserted in the bitch's vulva three times a day, starting six or seven days after she comes into season, the Testape will gradually turn green, indicating that breeding condition has been reached.

6. According to authorities, the best breeding time is from 2 days before ovulation to 2½ days after ovulation.

7. When the female is ready to breed, place her in with a stud to see if he is interested in her. If he is, remove the female and perform a digital examination.

8. Clip the hair from around the vulva region.

9. Take a large piece of cotton and drain the anal glands, by pressing firmly both sides of the rectum at the same instant.

10. Then clean hands thoroughly and check the vagina carefully for any fibers or webs that might prevent the insertion of the penis (a veterinarian can show how this can be done).

11. Rupture any fibers or webs found. If this is not done, the male may hit them, withdraw, and refuse to mount again.

12. Set the bitch up for mounting by the stud by having an assistant hold her steady while the owner brings up the stud. Kneel on the left side, facing the rear of the bitch.

13. Lift the male up to mounting position, he may need a platform under his feet for support. With the left hand under the bitch, roll the folds of the vulva open. With the right hand, place the male's penis in correct position for proper entrance. As he moves into the vagina, place the right hand squarely on his stern, below the tail and push him on for complete penetration. By feeling at the same time, with the left hand, it can be determined if the locking glands are inserted.

14. With a good contact, and after the male stops a pumping to-treading action, hold him solid to the bitch for a couple of minutes, with the right hand on the stern. When the throb of the stud's anus at regular intervals is seen or felt, and not before, turn him slowly so that he faces in opposite direction to the bitch. The service is thus completed by a proper "tie."

15. Two services at 24 to 48 hour intervals, completed as positive ties, result in a higher rate of conceptions.

(Carnation Company, reprinted with permission of copyright owner from Dogs, Kennels and Profits by Bob Bartos, the New American Library, Inc. 1972.)

I. What needs to be done when the bitch is pregnant, and when the puppies are born?

The next step is to see that she is wormed by the second or third week of her pregnancy, because worms can cause her to abort or they will infest the puppies when born. During this nine week gestation period, she will develop a larger appetite. See that she is fed properly but not so she becomes overweight. Exercise the bitch frequently to help keep her weight down, because a dog that is too fat, can have delivery problems. The pregnant female must be treated carefully by the whole family or the excitement may cause complications, such as the abortion of the fetus. At the start of the fifth week, the female should be limited in her movements, such as jumping up or down on furniture because her belly at this time should be to the point where it could be bumped causing injury to the unborn puppies.

About the eighth week whelping preparations need to be started in the household. The veterinarian needs to be contacted to get instructions on handling the delivery or any problems that might occur. A box lined with the bitch's favorite blanket should be prepared and she should be put in it so the new surroundings will be familiar. About the 60th day the blanket should be replaced with newspaper which the bitch will shred and arrange herself as she approaches whelping time.

The dog is ready to whelp when she is nervously pacing, her abdomen is extended, she wimpers, pants and strains, and her vulva dialates slightly. A dog should be encouraged to to to her whelping box and nest there rather than somewhere else in the house.

When the female dog goes into labor, she will signs of abdominal contraction, and she will consume a large amount of water. When the puppies begin to emerge, resist the temptation to help the bitch. Let the female do the work and do not interfere unless she is having extreme difficulty with delivery. The puppies will emerge enclosed in a membrane sac with an umbilical cord attached. The bitch will break the sac, bite off the cord, eat the membrane, and lick the puppy until he starts breathing. Sometimes the mother may reject the puppy so the breeder must act quickly to break the sac and get the puppy breathing properly. Then take the puppy and rub it against the nose of the bitch to show her that it is her puppy. Each puppy will be followed by the passing of the placenta.

The bitch will eat this also, but the breeder needs to count them to be sure a placenta is not retained in the uterus. If a placenta is retained, or the bitch is passing green mucus, call the veterinarian so he can solve the problem.

After the puppies have been delivered, check to see that they are getting milk from the mother. A sign of this is puppies with full, rounded bellies. Increase the mother's food supply gradually, and watch her carefully for any signs of illness or rejecting her puppies.

If the mother does not have enough milk for her puppies, the breeder will need to hand-feed them. A good mixture is one cup milk, one teaspoon corn syrup, and one egg yolk, fed with a small nippled bottle.

J. How are puppies weaned?

Referring back to section F, the puppies should be eating dog food by the age of six weeks. At this time, the puppies are separated from their mother and put on a full dog food diet. By this time the mother will be drying up and she should be removed from the whelping box and put on a special ration to dry her up completely. The puppies may cry, but they will soon quiet down and be eating only dog food in two or three days.

K. What are some tips for grooming dogs?

The first step toward good grooming is to acquire a grooming kit. The kit should contain:

1. Short- or long-bristled brush, depending on length of coat.
2. Comb with wide teeth for long-haired or wire-haired dog.
3. Stripping knife for wire-haired dogs; wool comb for long-haired dogs.
4. Scissors (barber type).
5. Nail clippers.

(Carnation Company, reprinted with permission of copyright owner from The Dog You Care For by Felicia Ames, The New American Library, Inc. 1968.)

The dog should be brushed daily to remove foreign material, dead hair, and to stimulate his hair follicles to give a glossy coat.

When a dog gets dirty, he will need to be washed. The bath should be given in a draft-free warm room in warm water. A commercial dog shampoo is advisable but not necessary as long

as the shampoo or soap is antibacterial. After washing, the dog needs to be thoroughly dryed before being let outside because he may catch a cold.

The next tip is to regularly clip the dog's nails. This will prevent the dog from scratching the furniture or another person. Unlike the cat, the dog does not need his nails to fight.

L. What are some tips for training dogs?

This section will be confined to teaching the dog some simple commands such as "heel," "sit," and "stay." When training a dog there are a few simple rules that need to be followed.

1. Reward and punishment are the basis for all training.

2. Work for brief periods only. Ten to fifteen minutes maximum.

3. Be consistent in your commands, body movements and voice inflections. Use the same words and motions.

4. Tailor your teaching technique to match the dog's disposition.

5. End every training session on a success. The puppy needs the owners praise and approval.

(Carnation Company, reprinted with permission of copyright owner from All About Puppies by Bob Bartos and Elizabeth Hutchings, published by the Special Marketing Division, Dell Publishing Co., Inc., 1973.

Before starting, the only training tools the owner will need are a leash and a collar. A slip chain or choke chain collar is the best and a leash eight to ten feet long.

The first area to be covered is getting the dog to sit on command. With the dog standing on all fours, tell the dog to "Sit." At the same time pull back on the collar and push down on his rump. Hold him in this position repeating the command "Sit." Then praise him by petting, a snack or using the word "Good." Repetition is the key to success.

The second area is to teach the dog to "heel." The purpose of this exercise is to teach the dog to walk quietly at the owner's left side. Hold the leash in the right hand and hold the leash close to the collar with the left hand. Now the owner is ready to start. Command the dog to "heel" and start walking forward slowly. If the dog tries to walk ahead or behind the owner a few jerks on the leash will bring the dog back to the heel position. When the dog has successfully "heeled" for ten feet or more, praise and reward him. Repeat the process often.

Teaching the command "stay," is a relatively simple obedience trick. Command the dog to "sit," and then put the hand directly in front of the dog's face repeating the command "stay." If he gets up, force him back down into the sit position at the exact spot from which he got up. Slowly inch away from him repeating the command "stay." If he gets up, say "no" and sit him back down.

The last command to be covered is "come." This is the most important and the most difficult lesson to teach the dog. To train him to "come," a light rope or cord 40 to 50 feet long should be attached to the dog's collar as an additional training tool. Allow the dog to stretch the rope out completely, then call his name or "come" and begin pulling him toward you while repeating his name. After he has reached the owner, the dog should be rewarded and praised. Again repetition is needed for successful results. The training should be practiced both outside and inside the house.

M. What are the major diseases and parasites of dogs?

Shortly after a dog is adopted, or the puppies are two weeks past weaning, the dogs need to see a veterinarian to get a check-up and shots for the four most lethal canine diseases:

1. Distemper, a highly contagious virus disease that attacks the dog's tissues.

2. Hepatitis, a virus infection that primarily affects the liver tissue.

3. Leptospirosis, acute infectious disease of dogs spread through contact of the mouth or nasal mucus membranes with the urine of either an infected dog or cat.

4. Rabies, a virus infection transmitted through the bite of infected animals.

The worms that cause trouble are the roundworms, hookworms, whipworms, and tapeworms. They can be diagnosed and treated by a veterinarian very easily.

External parasites are fleas, lice, ticks, and mites. There are many powders on the market to control these parasites and should be used regularly for best results.

N. What are some symptoms that indicate the dog is sick?

1. Loss of appetite.

2. The lower eyelid may hang down slightly, showing the red membrane.

3. The coat may have a harsh feel and a dead texture, both to the eye and the hand.

4. Mucus and traces of blood.

5. A potbelly, with the rest of the body skinny.

6. Lack of interest in anything.

7. Hiding in dark places.

8. Nasal discharges.

Problem Area IV: Sources of Information on other Household Pets

Problems and Concerns of Teacher in the Problem Area

This section was designed for the teacher to enable him to locate information on household pets other than dogs and cats. The areas are presented with the sources discovered during the data collection segment of this project. The areas are:

A. The Hamster
B. The Guinea Pig or Cavy
C. The Rabbit
D. The Rat
E. The Reptiles
F. General Information on Small Pets other than Dogs or Cats

Source Listings:

A. The Hamster
   1. Laboratory Animal Fact Sheet #6, data from CAES course "Animal Science Techniques" by Dr. E. Santamarina. Available through VPI&SU Veterinary Science Dept. Extension Division. Containing the following information:
      a. Hamsters use in research
      b. Hamsters characteristics
      c. Hamsters uses
      d. Handling the hamster
      e. Environmental conditions needed
      f. Hamster cages
      g. Feeding a hamster
   2. Laboratory Animal Fact Sheet #7, data from CAES course "Animal Science Techniques" by Dr. E. Santamarina. Available through VPI&SU Veterinary Science Dept. Extension Division. Containing the following information:
      a. Life span
      b. Sexual maturity
      c. Estrous cycle
      d. Ovulation
      e. Spermatogenesis
      f. Breeding span
      g. Hibernation
      h. Length of pregnancy
      i. Litter size
      j. Sexing
      k. Weaning time
      l. Food and water consumption
      m. Body weight
      n. Body temperature
      o. Respiration
      p. Heart rate
      q. Blood information

3. Small Animals -- Hamsters --, Available through the Cooperative Extension Service. Ohio State University, 4-H Circular 220. Workbook for raising Hamsters. 2120 Fyffe Road, Columbus, Ohio 43210. The following areas are considered in the guide:
   a. Find out about your pet! Historical Information
   b. Choosing your Hamster
   c. Choosing a House For Your Pet
   d. Feeding your Pet
   e. Care and Other Management Tips
   f. Your Pet's Health
   g. Getting Ready for the Show

B. The Guinea Pig or Cavy
1. Laboratory Animal Fact Sheet #8, Source same as Hamster. Contains same information as Fact Sheet #6 only concerning Guinea Pigs.
2. Laboratory Animal Fact Sheet #9, Source same as Hamster. Contains same information as Fact Sheet #7 only concerning Guinea Pigs.
3. 4-H Guinea Pig 1, Available through the Cooperative Extension Service. Ohio State University, 4-H Circular 215. Workbook for raising guinea pigs. 2120 Fyffe Road, Columbus, Ohio 43210. The following areas are considered in the guide:
   a. Project Requirements for successful completion
   b. Background on Guinea Pigs
   c. Breed Selection
   d. Housing and Equipment
   e. Feeding-Watering
   f. Care and Other Management Tips
   g. Disease and Sanitation
   h. Getting Ready for the Fair

C. The Rabbit
1. Laboratory Animal Fact Sheet #3, Source same as Hamster, Information categories same as Fact Sheet #6.
2. Rabbit Project I. Available through the Cooperative Extension Service. Ohio State University, 4-H Circular 211. This is the first in a series of three rabbit project workbooks. It is composed of eight (8) work areas that are the same as B-3 above except for area (b) which is historical information on rabbits.
3. Rabbit Project II. Available through the Cooperative Extension Service. Ohio State University, 4-H Circular 212. This rabbit project deals mainly with the raising of rabbits for profit. The lesson areas are similar to those in the first publication. The difference being in this booklet the author went into much more detail.
4. Rabbit Project III. Advanced, available through the Cooperative Extension Service. Ohio State University, 4-H Circular 264. As the title implies this workbook is designed

for students that are advanced in the field of rabbit production. Some areas considered include detailed housing plans, disease detection, marketing rabbits, how to dress rabbits, genetic experiments with rabbits, and choosing a career in rabbit production.

5. 4-H Rabbit Project, Available through New York State College of Agriculture and Life Sciences, Cornell University, Cooperative Extension, Ithaca, New York 14850. The project book has ten (10) lessons and a material source section. The ten lessons are as follows:
   a. Rabbits-Pets and Profits
   b. Parts of a Domestic Rabbit
   c. Selecting your Foundation Animals
   d. Feeding and Care
   e. Breeding
   f. Management
   g. Showing Your Rabbits
   h. Diseases
   i. Do's and Don'ts
   j. Rabbit Talk

D. The Rat
   1. Laboratory Animal Fact Sheet #5, Source same as the Hamster. On this sheet is information along the same lines as the other Fact Sheets.
   2. MUP Clinical Reports, Care of the Pet Rat by Phillip Ray Glick DVM. Modern Veterinary Practices Magazine, July, 1972, pp. 37-39. The report is divided into three (3) areas of investigation: Diet, Housing, and Handling; Diseases; and Public Health Aspects. Being written by a veterinarian, the article covers in detail the subject of care providing an excellent insight into the "care of the pet rat."

E. Materials on Pocket Pets
   1. Small Animals. Pocket Pets, Cooperative Extension Service. The Ohio State University. 4-H Circular 221. It contains information on the care and feeding of Mice and Rats, and Gerbils.
   2. Pocket Pets by Lawrence E. Jurrist, and Nancy Dietz, and G. W. Meyerholz, DVM. Publication Number 4-H S1 19.0. Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville.
      It is an outline for a short-term interest project on pocket pets: mice, rats, gerbils, guinea pigs, and hamsters. It was designed to introduce the student to pocket pets, explore the pleasures involved, and give an understanding of the responsibilities in owning a pocket pet.
   3. Pocket Pets by Jurrist, Dietz, and Meyerholz, DVM. Publication Number 4-H S1 19.1M. Florida Cooperative Extension Service, same as above.

The publication is a student answer book for the proceeding publication. The book is divided by lesson listing questions related to the booklet 4-H S1 19.0.

F. General Pet Booklets

1. The 4-H Pet Care Project by Dennis A. Hartman, 4-H member's Guide M-4-21. New York State College of Agriculture and Life Sciences, A Statutory College of the State University, Cornell University. 25¢. The pets discussed in this guide are as follows: Cats; Tropical Fish; the Rabbit; Birds- the Canary, Parakeet or Finch; the Gerbil; the Hamster; and the Guinea Pig. General information and tips on the care and feeding of these animals are included.
2. Pets. 4-H Bulletin 75-1970. University of Minnesota Agricultural Extension Service, St. Paul, Minnesota 55101. The publication explores the care and feeding of many different household pets. These include cats, birds, fish, turtles, hamsters, mice and cats, guinea pigs, gerbils, and rabbits. Areas such as housing, feeding, handling, and breeding are considered in short concise paragraphs.
3. Selection and Care of Common Household Pets, Agricultural Information Bulletin Number 332. U. S. Department of Agriculture, Washington, D. C. 20250. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402 - Price 15¢. The manual is divided into two major divisions: Mammals; and Birds, and numerous subdivisions under each heading. Under the mammals, cats, dogs, gerbils, guinea pigs, hamsters, rabbits, white mice, and wild animals are examined briefly over many areas important in the raising of the animals as household pets. The birds covered in the booklet include canaries, finchs, parakeets, and parrots. Only a limited amount of material on birds was presented, covering briefly some management practices performed when caring for birds.

G. Animal Gestation Chart, Source: Animal Care Equipment Catalog #30, Hoeltge Inc., Cincinnati, Ohio 45238.
The chart lists the gestation information of thirteen different animals. Included in the chart are information on the minimum breeding age, ovulation time, estrous cycle, duration of heat, length of gestation, rebreed often parturition, and weaning age.

H. Normal Physiological Data of Animals, available through Veterinary Extension Service, VPI&SU, Blacksburg, Virginia 24061.
The data chart lists the normal body temperature, normal pulse-rates, and normal respiratory rates of a wide assortment of animals.

I. Care of Reptiles in Captivity, contact G. A. MacInnis, Veterinary Extension Service, Blacksburg, Virginia 24061.
Covered in the booklet are the different reptiles that are most commonly kept as pets in the home. Area division titles include: thermal requirements, humidity and heat, snakes, hatching reptile eggs, turtles, hatching turtle eggs, lizards, crocodilians,

charts on medication, clinical values, cloacal temperatures, reptile incubation periods, and anthelmintics, the last area is the bibliography.

J. Raising Laboratory Animals and other Small Stock by Dr. L. R. Arrington, Florida Agricultural Extension Service, University of Florida, Gainesville.
The caring, feeding uses, and housing of laboratory animals is very important to the researcher. This pamphlet helps to explain what is involved in raising laboratory stock. Involvement as far as the marketing of the laboratory animals is also included.

K. Clinicare Dietary Animal Foods, Agway Country Foods Professional Products, Agway Inc., 350 Vanderbil Motor Pkwy., Hauppauge, L. I., N. Y. 11787.
The publication is a list of dietary products to aid in the management of various conditions in dogs and cats. These high quality, individualized diets allow the veterinarian to control the quality of dietary intake. Six therapeutic diets are presented in the publication for different situations such as gestation and growth, obesity, and enteritis, diarrhea, and pre- and post-operative conditions.

Problem Area V: Identifying Occupational Opportunities in Household Pet Care

Problems and Concerns of Students in the Problem Area

Suggested lead question: How many different occupations can you name in pet care?

A. What pet care occupations are available in the area of animal care?
B. What qualifications need to be met in the area of animal care for successful job completion?
C. What pet care occupations are available in the area of cropping, animal farming, gardening, and related work?
D. What qualification requirements need to be met in the area of cropping, animal farming, gardening, and related work for successful job completion?
E. What pet care occupations are available in the area of medical, veterinary, and related work?
F. What qualification requirements need to be met in the area of medical, veterinary, and related work for successful job completion?
G. What are some pet care occupations not found in the above areas?

References

Barr, Glenn. "Professions In Dogs," Kennel Review, August 1974, pg. 30.

Gaines Dog Research Center. "Learning By Doing, Best Preparation For Career in Dogs," Article source unknown, (Mimeo).

* U. S. Department of Labor. Dictionary of Occupational Titles Volumes I & II. U. S. Government Printing Office, Washington, D. C. 20402, 1965. Price $6.75 each.

* Most used reference

Visual Aids and Other Equipment:

A. Chalkboard
B. Overhead projector, opaque projector, and screen

Special Events and Activities:

A. Plan a visit to a professional breeders operation.
B. Have the class bring in newspaper, magazine, or other articles on a pet care career.
C. Have pet care person(s) come into the classroom and describe what their job entails.
D. Visit the local dog pound and discover the different jobs that are done at the location.

Application and Evaluation:

A. The problem area was undertaken to make the students aware of the career opportunities in the area of pet care.

B. At the end of the lesson have the students go out into the community and compile a list of the different pet care occupations that are in the community. Offer a reward for the student(s) that identify the most pet care occupations.

Content Summary (for use by teacher):

A. What pet care occupations are available in the area of animal care?

1. Animal keeper: Feeds, waters, and cleans quarters of animals and birds in zoo, circus, or menagerie. Observes and reports sick animals and birds. Treats minor injuries or ailments. Transfers animals or birds from one cage or pen to another. May prepare food. May bathe and groom animals. May answer questions of visitors concerning animals or birds. May be designated according to animal care for as bear keeper, bird keeper, cat keeper, deer keeper, elephant keeper, mammal keeper, monkey keeper, reptile keeper.

2. Animal keeper, Head: Supervises and coordinates activities of animal keepers engaged in care and exhibition of birds and animals at zoo: Examines animals to determine need for medical care. Supervises animal keepers in preparation of food to insure adequate diet for each type of animal. Inspects cages for cleanliness and issues instructions for repair or construction of cages. Specifies type of animal to exhibit and location of exhibition according to weather conditions, behavior characteristics of animal, and its physical condition. May employ, train, and discharge animal keepers. May keep time records, and prepare supply requisitions and other clerical reports.

3. Animal man, Head: Supervises and coordinates activities of keepers in attending to animals in circus, based on knowledge of characteristics, living habits, and requirements of various animals. May coordinate training of animals for circus performances.

4. Aquarist, aquarium tankman: Attends to fish and other marine life on exhibition in aquarium as directed by Curator(museum); Prepares food or special diets for and feeds fish during scheduled periods. Cleans bottom and clears away algae on windows of tanks, using scrubbing brushes. Attends to marine plants and decorations used in live tank displays. Takes water samples for laboratory analysis and changes environmental condition of fish by adjusting temperature, acidity, and other properties of water. Observes and reports diseased, injured, or dead fish. Gives medical treatments to and provides other necessities for fish as directed. May record number and kinds of fish for inventory purposes. May accompany expeditions to collect various species of fish and other marine life.

5. Dog groomer, dog bather, dog beautician, dog-hair clipper: Performs the following duties to groom dogs: Regulates bathwater temperature by adjusting valves to control flow of hot and cold water. Washes dog with perfumed soap or shampoo solution, using handbrush. Repeats washing until dog is clean and free of body odor. Dries dog, using towel and electric dryer. Trims and shapes dog's hair and toenails, using scissors and clippers. Cleans animal's quarters.

6. Dog-pound attendant: Attends to animals picked up and brought to pound by feeding and watering them and cleaning and disinfecting their pens. Makes routine repairs to pens and other installations.

7. Kennelman, dog care man, dog handler: Attends to dog in kennel: Cleans kennels and rebeds dog pens using brushes and disinfectant solutions. Washes dogs and grooms and trims them for exhibition, using hand brushes, clippers, combs, and scissors. Weighs and mixes specified amounts of feeds, and fills feed and water troughs. Observes dogs to detect sickness and presence of disease. May regulate temperature and ventilation in kennel. May exercise dogs on treadmill. May maintain feed and breeding records. May assist in training dogs for hunting, guiding and tracking.

8. Kennel master: Performs the following tasks at dog-racing track before each race: Verifies credentials of each dog entered in race, comparing color, name, and sex of dog and name of owner with information on racing form. Insures that dogs are admitted to assigned stalls, notifying other workers to round up appropriate dogs in advance of each race. Guards dogs to prevent unauthorized persons from injuring them or attempting illegally to influence their performance. Notifies owner or veterinary personnel in cases of injury or suspected illness. Cleans racing stalls after each race, using disinfectant solution. Notifies track officials of irregularities, as required by racing regulations.

9. Pet shop attendant: Cares for birds and animal pets in a pet shop: Feeds and waters birds and animals by replenishing troughs. Cleans pens and cages, using scraper and shovel. Observes birds and animals for signs of sickness or injury. Transfers birds and animals from one cage to another, or removes them according to customer selection, manually or by use of a net.

10. Stableman, stableboy: Cares for horses or mules while animals are in stables to protect their health and improve their appearance: Changes or replenishes drinking water for animals. Selects, measures, and mixes feed, such as oats, barley, corn, and vitamins, and rations feed to animals according to past consumption of animal and instructions from owner or barn boss. Washes, brushes, and curries animals and trims their manes and tails. Inspects animals to detect evidence of disease or injury, and informs supervisor of findings. Treats sick or injured animal according

to instructions from veterinarian. Shovels and sweeps refuse and old bedding from stalls and spreads fresh bedding straw for animals. Cleans feed troughs. Unloads straw, grain, and supplies from trucks and transfers material to storage. Exercises animals at regular intervals. May harness or saddle animals. May shoe animals. May whitewash stables, using brush. May be designated according to animal cared for as horse tender, mule tender, stallion keeper.

11. Veterinary-hospital attendant: Cares for animals under treatment in animal hospital for disease, injury, or for production of serums: Leads, wheels, or carries animal from quarters to treatment room. Lifts animal onto treatment table and applies restraints or holds it during treatment. Sterilizes surgical instruments and other equipment, such as rubber gloves, syringes, and test tubes, using germicides and autoclave. Administers anesthetic, medications, and prescribed nursing care, under direction of veterinarian. Measures, mixes, grinds, and chops specified ingredients to prepare food, and feeds animals. Bathes and brushes animals and clips their hair and nails. Sweeps, dusts, mops, and hoses hospital rooms and animal quarters. May receive clients, answer telephone, make appointments, and accept payment on accounts.

B. What qualification requirements need to be met in the area of animal care for successful job completion?

1. Work performed: Work activities in this group primarily involve providing for the welfare of animals. Typical activities are feeding, watering, sheltering, exercising, and grooming animals, and treating them for minor illnesses or injury.

2. Worker requirements: An occupationally significant combination of: A liking for animals and a sense of responsibility for their welfare; finger and manual dexterity; eye-hand-foot coordination; motor coordination; ability to adjust to routine work; and physical stamina.

3. Clues for relating applicants and requirements: Fondness for pets. Good physical condition. Membership in 4-H club.

4. Training and methods of entry: Opportunities for entry into these activities exist in large metropolitan areas, where there are many pets and services for their care, and in rural locations where breeding, raising, and caring for animals is an important aspect of the local economy. Workers are usually assigned elementary tasks in the beginning, and learn through experience and observation to perform at the more demanding level.

5. Qualifications Profile:

a. General Educational Development:

1. a. apply common sense understanding to carry out detailed but uninvolved written or oral instructions. Deal with problems involving a few concrete variables in or from standardized situations.
   b. use arithmetic to add, subtract, multiply, and divide whole numbers.
2. a. apply common sense understanding to carry out instructions furnished in written, oral, or diagrammatic form. deal with problems involving several concrete variables in or from standardized situations.
   b. make arithmetic calculations involving fractions, decimals and percentages.
3. Comprehension and expression of a level to:
   a. file, post, and mail such material as forms, checks, receipts, and bills.
   b. copy data from one record to another, fill in report forms, and type all work from rough draft or corrected copy.
   c. interview members of household to obtain such information as age, occupation, and number of children, to be used as data for surveys, or economic studies.
   d. guide people on tours through historical or public buildings, describing such features as size, value, and points of interest.

b. Specific Vocational Preparation: The amount of time required to learn the techniques, acquire information, and develop the facility needed for average performance in a specific job-worker situation. This training may be acquired in a school, work, military, institutional, or avocational environment. It does not include orientation training required of even every fully qualified worker to become accustomed to the special conditions of any new job. Specific vocational training given in any of the following circumstances:

1. Vocational education (such as high school commercial or shop training, technical school, art school, and that part of college training which is organized around a specific vocational objective);
2. Apprentice training (for apprenticeable jobs only);
3. In-plant training (given by an employer in the form of organized classroom study);
4. On-the-job training (serving as learner or trainee on the job under the instruction of a qualified worker);
5. Essential experience in other jobs (serving in less responsible jobs which lead to the higher grade job or serving in other jobs which qualify).

---

1. Over 1 year up to and including 2 years.
2. Over 30 days up to and including 3 months.
3. Over 3 months up to and including 6 months.
4. Over 6 months up to and including 1 year.

c. Aptitudes: Specific capacities and abilities required of an individual in order to learn or perform adequately a task or job duty.

1. Intelligence: General learning ability. The ability to "catch on" or understand instructions and underlying principles. Ability to reason and make judgments. Closely related to doing well in school.
   a. the middle third of the population.
   b. the lowest third exclusive of the bottom 10 percent of the population.
2. Verbal: Ability to understand meanings of words and ideas associated with them, and to use them effectively. To comprehend language, to understand relationships between words, and to understand meanings of whole sentences and paragraphs. To present information or ideas clearly.
   a. the lowest third exclusive of the bottom 10 percent of the population.
   b. the middle third of the population.
3. Numerical: Ability to perform arithmetic operations quickly and accurately.
   a. the lowest third exclusive of the bottom 10 percent of the population.
4. Spatial: Ability to comprehend forms in space and understand relationships of plane and solid objects. May be used in such tasks as blueprint reading and in solving geometry problems. Frequently described as the ability to "visualize" objects of two or three dimensions, or to think visually of geometric forms.
   a. the lowest third exclusive of the bottom 10 percent of the population.
5. Form Perception: Ability to perceive pertinent detail in objects or in pictorial or graphic material; To make visual comparisons and discriminations and see slight differences in shapes and shadings of figures and widths and lengths of lines.
   a. the lowest third exclusive of the bottom 10 percent of the population.
   b. the middle third of the population.
6. Clerical Perception: Ability to perceive pertinent detail in verbal or tabular material. To observe differences in copy, to proofread words and numbers, and to avoid perceptual errors in arithmetic computation.
   a. the lowest 10 percent of the population.
   b. the lowest third exclusive of the bottom 10 percent of the population.
7. Motor Coordination: Ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make a movement response accurately and quickly.
   a. the middle third of the population.
   b. the lowest third exclusive of the bottom 10 percent of the population.

8. Finger Dexterity: Ability to move the fingers and manipulate small objects with the fingers rapidly or accurately.
   a. the middle third of the population.
   b. the lowest third exclusive of the bottom 10 percent of the population.
9. Manual Dexterity: Ability to move the hands easily and skillfully. To work with the hands in placing and turning motions.
   a. the middle third of the population.
10. Eye-Hand-Foot Coordination: Ability to move the hand and foot coordinately with each other in accordance with visual stimuli.
   a. the lowest 10 percent of the population.
   b. the lowest third exclusive of the bottom 10 percent of the population.
   c. the middle third of the population.
11. Color Discrimination: Ability to perceive or recognize similarities or differences in colors, or in shades or other values of the same color; to identify a particular color, or to recognize harmonious or contrasting color combinations, or to match colors accurately.
   a. the lowest 10 percent of the population.
   b. the lowest third exclusive of the bottom 10 percent of the population.

d. Interests: Preferences for certain types of work activities or experiences, with accompanying rejection of contrary types of activities or experiences. Five pairs of interest factors are provided so that a positive preference for one factor of a pair also implies rejection of the other factor of that pair.
   1. Situations involving a preference for activities involving business contact with people.
   2. Situations involving a preference for activities of a scientific and technical nature.
   3. Situations involving a preference for activities resulting in tangible, productive satisfaction.
   4. Situations involving a preference for activities that are nonsocial in nature, and are carried on in relation to processes, machines, and techniques.

e. Temperaments: Different types of occupational-situations to which workers must adjust.
   1. Situations involving a variety of duties often characterized by frequent change.
   2. Situations involving the direction, control, and planning of an entire activity or the activities of others.
   3. Situations involving the evaluation (arriving at generalizations, judgments, or decisions) of information against sensory or judgmental criteria.
   4. Situations involving the evaluation (arriving at generalizations, judgments, or decisions) of information against measurable or verifiable criteria.

f. Physical Demands: Physical demands are those physical activities required of a worker in a job.
The physical demands referred to serve as a means of expressing both the physical requirements of the job and the physical capacities (specific physical traits) a worker must have to meet the requirements. For example, "seeing" is the name of a physical demand required by many jobs (perceiving by the sense of vision), and also the name of a specific capacity possessed by many people (having the power of sight). The worker must possess physicle capacities at least in an amount equal to the physical demands made by the job.

1. light work: lifting 20 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 10 lbs. even though the weight lifted may be only a negligible amount, a job is in this category when it requires walking or standing to a significant degree, or when it involves sitting most of the time with a degree of pushing and pulling of arm and/or leg controls.
2. medium work: lifting 50 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 25 lbs.
3. heavy work: lifting 100 lbs. maximum with frequent lifting and/or carrying of objects weighing up to 50 lbs.
4. stooping, kneeling, crouching, and/or crawling:
   a. stooping: bending the body downward and forward by bending the spine at the waist.
   b. kneeling: bending the legs at the knees to come to rest on the knee or knees.
   c. crouching: bending the body downward and forward by bending the legs and spine.
   d. crawling: moving about on the hands and knees or hands and feet.
5. reaching, handling, fingering, and/or feeling:
   a. reaching: extending the hands and arms in any direction.
   b. handling: seizing, holding, grasping, turning, or otherwise working with the hand or hands (fingering not involved).
   c. fingering: picking, pinching, or otherwise working with the fingers primarily (rather than with the whole hand or arm as in handling).
   d. feeling: perceiving such attributes of objects and materials as size, shape, temperature, or texture, by means of receptors in the skin, particularly those of the finger tips.
6. seeing: obtaining impressions through the eyes of the shape, size, distance, motion, color, or other characteristics of objects. The major visual functions are:
   a. acuity, far -- clarity of vision at 20 feet or more. acuity, near -- clarity of vision at 20 feet or less.
   b. depth perception --- three dimensional vision. the ability to judge distance and space relationships so as to see objects where and as they actually are.
   c. field of vision -- the area that can be seen up and down or to the right or left while the eyes are fixed on a given point.

d. accomodation -- adjustment of the lens of the eye to bring an object into sharp focus. This item is especially important when doing near-point work at varying distances from the eye.
e. color vision -- the ability to identify and distinguish colors.

C. What pet care occupations are available in the area of cropping, animal farming, gardening, and related work?

1. Animal breeder: Breeds and raises mice, rats, guinea-pigs, monkeys and other animals for use in experimental and biological research: Keeps record of genealogy, weight, diet, and other data for breeding purposes. Breeds and crossbreeds animals, selectively, to produce offspring with particular genes, traits, color, and size. Feeds and waters animals and cleans their pens and yards. Examines animals to detect signs of illness. Builds and repairs hutches, pens, and fences yards. Adjusts temperature in building where animals are kept to approximate temperature of animal's habitat. Arranges with hospitals and research centers for sale of animals. May be designated according to particular kind of animal bred and raised as guinea-pig breeder, mouse breeder, rat breeder.

2. Animal caretaker: Attends to animals, such as mice, guinea pigs, and rats used in experimental and biological research: Feeds and waters animals and cleans their cages. Examines animals to detect signs of illness. Adjusts controls to insure that temperature and humidity of animals' quarters are within specified limits. Separates weaned animals from their mothers. Segregates animals according to breed, color, size, and age. Keeps record of genealogy, weight, and diet of animals for breeding purposes. Places animals in containers for shipment. May inoculate animals with serums or antibiotics; Cares for animals, such as mice, dogs, and monkeys used in medical and biological tests and research: Weighs or measures, grinds, chops, and mixes specified quantities of ingredients to prepare animal food. Feeds and waters animals as indicated by schedules and diet lists, and records amount consumed. Leads or carries animals between quarters, laboratories, and surgery. Shaves operative area of animals to prepare them for surgery, and administers anesthetics. Cleans and sterilizes cages, pens, and surrounding areas, such as walls, windows, and floors, using steam or germicidal solutions. Places portable cages in autoclave to sterilize them. Repairs cages and equipment, using handtools. Sprays insecticides and spreads powder in animal quarters to exterminate insects. Orders feed and supplies. May remove dead animals to incinerator for cremation.

3. Cat breeder: Breeds, raises, and sells cats, usually specializing in one variety: Breeds cats selectively. Houses, feeds, waters, and grooms cats. Exhibits prize specimens in shows. Buys cats for breeding and sells cats for breeding, pets, or other purposes.

4. Dog breeder, dog fancier, kennel keeper: Breeds, raises, and sells purebred dogs, usually concentrating on one strain: Feeds, waters, and cares for animals. Grooms and exhibits best dogs in shows. Sells dogs for pets, for breeding, or for purpose trained. May train bird dogs, police dogs, and other types, according to breed.

5. Rabbit breeder, rabbit fancier: Breeds and raises rabbits: Breeds rabbits selectively to produce heartier, healthier, and more productive stock. Keeps records of genealogy, weight, diet, and other data for breeding purposes. Feeds and waters rabbits and cleans their pens and yards. Examines rabbits to detect signs of illness. Culls rabbits that are ill and those that do not reproduce standard number of offspring in each litter per year. Keeps records of each rabbit to determine number of offspring produced, number of times ill, and progressive growth in relation to amount of food consumed. Selects rabbits to be sold according to size, weight, and sex. Builds and repairs rabbit hutches, pens, and yards. Arranges with meat packing houses and other breeders for sale of rabbits. May kill and dress rabbits or ship them to buyers and other breeders. May breed and raise rabbits and sell them to scientific research centers for experimental purposes. May sell rabbits for pets.

6. Reptile farmer: Raises snakes for exhibition in zoos and circuses or for their meat, venom, and skins: Buys or captures snakes and keeps them in cages that simulate their habitat. Feeds and waters snakes. Milks live snakes for their venom for use in making serums. Kills snakes. Arranges with buyers for sale of their meat for food and their skins for use as leather in making wearing apparel, such as shoes, belts, or purses. May raise other reptiles, such as alligators and lizards. May specialize in raising rattlesnakes, and be designated as rattlesnake farmer.

D. What qualification requirements need to be met in the area of cropping, animal farming, gardening, and related work for successful job completion?

1. Work performed: Work activities in this group primarily involve farming, gardening, and animal breeding and raising. Workers may be self-employed or work for others.

2. Worker requirements: An occupationally significant combination of: Interest in outdoor work; ability to comprehend and make practical application of principles of agricultural science; finger and manual dexterity; eye-hand coordination; and physical stamina.

3. Clues for relating applicants and requirements: Success in agricultural courses in high school or agricultural courses in high school or agricultural school. Experience in 4-H clubs. Good physical condition. Subscriptions to outdoor magazines. Casual summer gardening or farming experience.

4. Training and methods of entry: Growing up on a farm or similar rural environment is the best preparation for entry into this work. Opportunity for entry as a hired hand is limited by the seasonality of this employment and the general decline in demand for hired farmworkers due to increasing mechanization of farmwork. The local county agricultural agent may be contacted for information and advice concerning opportunities and requirements for entry into this field. High schools, colleges, and organized groups, such as Future Farmers of America and 4-H Clubs, offer day and evening courses in subjects related to agriculture. Young farmer and adult farmer programs offer training in such aspects of farming as pest control, land use, and cattle breeding.

5. Oualifications Profile:

   a. General Educational Development:
      1. a. apply principles of rational systems to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Interpret a variety of instructions furnished in written, oral, diagrammatic, or schedule form.
         b. perform ordinary arithmetic, algebraic, and geometric procedures in standard, practical applications.
         c. comprehension and expression of a level to:
            1. transcribe dictation, make appointments for executive and handle his personal mail, interview and screen people wishing to speak to him, and write routine correspondence on own initiative.
            2. interview job applicants to determine work best suited for their abilities and experience, and contact employers to interest them in services of agency.
            3. interpret technical mannuals as well as drawings and specifications, such as layouts, blueprints, and schematics.
      2. a. apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions. Interpret an extensive variety of technical instructions, in books, manuals, and mathematical or diagrammatic form. Deal with several abstract and concrete variables.

b. apply knowledge of advanced mathematical and statistical techniques such as differential and integral calculus, factor analysis, and probability determination, or work with a wide variety of theoretical mathematical concepts and make original applications of mathematical procedures, as in empirical and differential equations.
c. comprehension and expression of a level to:
   1. report, write, or edit articles for such publications as newspapers, magazines, and technical or scientific journals. prepare and draw up deeds, leases, wills, mortgages, and contracts.
   2. prepare and deliver lectures on politics, economics, education, or science.
   3. interview, counsel, or advise such people as students, clients, or patients, in such matters as welfare eligibility, vocational rehabilitation, mental hygeine, or marital relations.
   4. evaluate engineering technical data to design buildings and bridges.

b. Specific Vocational Preparation:
   1. Over 1 year up to and including 2 years.
   2. Over 2 years up to and including 4 years.

c. Aptitudes:
   1. Intelligence:
      a. the middle third of the population.
      b. the highest third exclusive of the top 10 percent of the population.
   2. Verbal:
      a. the middle third of the population.
   3. Numerical:
      a. the middle third of the population.
   4. Spatial:
      a. the middle third of the population.
      b. the lowest third exclusive of the bottom 10 percent of the population.
   5. Form perception:
      a. the middle third of the population.
   6. Clerical perception:
      a. the lowest third exclusive of the bottom 10 percent of the population.
   7. Motor coordination:
      a. the middle third of the population.
      b. the lowest third exclusive of the bottom 10 percent of the population.
   8. Finger dexterity:
      a. the middle third of the population.
      b. the lowest third exclusive of the bottom 10 percent of the population.
   9. Manual dexterity:
      a. the middle third of the population.

10. Eye-hand-foot coordination:
    a. the middle third of the population.
    b. the lowest third exclusive of the bottom 10 percent of the population.
    c. the lowest 10 percent of the population.
11. Color discrimination:
    a. the middle third of the population.
    b. the lowest third exclusive of the bottom 10 percent of the population.
    c. the lowest 10 percent of the population.

d. Interests:
    1. Situations involving a preference for activities resulting in tangible, productive satisfaction.
    2. Situations involving a preference for activities of a scientific and technical nature.
    3. Situations involving a preference for activities dealing with things and objects.
    4. Situations involving a preference for activities that are nonsocial in nature, and are carried on in relation to processes, machines, and techniques.

e. Temperaments:
    1. Situations involving a variety of duties often characterized by frequent change.
    2. Situations involving the direction, control, and planning of an entire activity or the activities of others.
    3. Situations involving the evaluation (arriving at generalizations, judgments, or decisions) of information against sensory or judgmental criteria.
    4. Situations involving the evaluation (arriving at generalizations, judgments, or decisions) of information against measurable or verifiable criteria.

f. Physical Demands:
    1. Light work.
    2. Medium work.
    3. Heavy work.
    4. Climbing and/or balancing.
    5. Stooping, kneeling, crouching, and/or crawling.
    6. Reaching, handling, fingering, and/or feeling.
    7. Seeing.

E. What pet care occupations are available in the area of medical, veterinary, and related work?

1. Laboratory technician, veterinary: Prepares vaccines, biologicals, and serums for prevention of animal diseases: Innoculates embryo chicks, broths, or other bacteriological media with organisms. Incubates bacteria for specified period and prepares vaccines and serums by standard laboratory methods. Tests vaccines for sterility

and virus inactivity and bottles them. Examines meat and dairy products to determine if products meet standards of quality and purity. Prepares standard volumetric solutions and reagents used in testing, and cleans laboratory equipment.

2. Veterinarian: Diagnoses and treats diseases and disorders of animals: Determines nature of disease or injury and treats animal surgically or medically. Tests dairy herds for tuberculosis and brucellosis, and inoculates animals against diseases, such as hog cholera and rabies. Performs autopsies to determine causes of death. Inspects animals intended for human consumption, before and after slaughtering. Advises on care and breeding of animals. Engages in general practice, treating various animal species, or specializes, restricting practice to dogs, cats, and other pets, or to a single species, such as cattle, horses, or poultry. May engage in a particular function, such as research and development, consultation, administration, teaching, technical writing, sale or production of commercial products, or rendition of technical services for commercial firms.

3. Veterinarian, laboratory animal care: Conducts research on diseases and nutritional problems of laboratory animals, such as hamsters, rabbits, monkeys, and mice, and on other health-related problems involving their use.

4. Veterinary livestock inspector: Inspects animals for presence of disease: Performs standard clinical tests and submits specimens of tissues and other parts for laboratory analysis. Reports existence of disease condition to state and federal authorities. Advises livestock owners of economic aspects of disease eradication and advises consumers of public health implications of diseases transmissible from animals to humans. May institute and enforce quarantine or other regulations governing import, export, and interstate movement of livestock. Required to hold degree of Veterinary Medicine.

F. What qualification requirements need to be met in the area of medical, veterinary, and related work for successful job completion?

1. Work performed: Work activities in this group primarily involve applying knowledge of medical science to the diagnosis, prevention, and treatment of human and animal diseases, disorders, and injuries. Activities may be general in nature, but specialization in the treatment of specific illnesses or specific areas of the body is also common. Specializations in surgery are not included in this group.

2. Worker requirements: An occupationally significant combination of: Intellectual capacity to comprehend a wide variety of subjects in basic medical sciences and college-level courses in humanities and social sciences; analytical ability to derive nature, origin, and probably course of illness or disorder from diagnostic and historical information; verbal ability to learn and use terminology; spatial perception to visualize position and arrangement of unseen organs, bony structures, and tissues from X-ray photographs and knowledge of anatomy; numerical ability for study of chemistry, physics, calculus, and other basic subjects; form perception to observe physical manifestations of disease or tissue damage, stamina to work long and irregular hours when required; and some finger dexterity for administering injections and performing autopsies.

3. Clues for relating applicants and requirements: Demonstrated intellectual ability at the college or university level. Interest in scientific fields, as demonstrated by reading habits, club memberships, and hobbies. Interest in the health and welfare of people.

4. Training and methods of entry: Three to four years of premedical college study, followed by 4 years of medical training and 1 year internship is generally recognized as the minimum preparation for medical doctors. Specialization in any of the 32 fields recognized by the medical profession requires another 4 to 6 years of advanced hospital training and experience. Two to three years of preveterinary or predental college work, followed by 4 years of study in a school of veterinary medicine or dentistry is the generally recognized minimum preparation for veterinarians and dentists. Doctors of medicine, veterinary medicine, and dentistry must pass licensure examinations to practice in all States and the District of Columbia. In addition to having their own private practices, workers are employed in Federal, State and local government, the military services, and the U. S. Public Health Service. Full-time or part-time teaching and research positions in colleges, government agencies, and private foundations may be available to people with advanced training and experience, particularly in the various specialties.

5. Qualifications profile:
   a. General Educational Development:
      1. (a) apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions. Interpret an extensive variety of technical instructions, in books, manuals, and mathematical or diagrammatic form. Deal with several abstract and concrete variables.
         (b) apply principles of logical or scientific thinking to a wide range of intellectual and practical problems. Deal with nonverbal symbolism (formulas, scientific equations, graphs, musical notes, etc.) in its most

difficult phases. Deal with a variety of abstract and concrete variables. Apprehend the most abstruse classes of concepts.

2. apply knowledge of advanced mathmatical and statistical techniques such as differential and integral calculus, factor analysis, and probability determination, or work with a wide variety of theoretical mathematical concepts and make original applications of mathematical procedures, as in empirical and differential equations.
3. comprehension and expression of a level to:
   a. report, write, or edit articles for such publications as newspapers, magazines, and technical or scientific journals. prepare and draw up deeds, leases, wills, mortgages, and contracts.
   b. prepare and deliver lectures on politics, economics, education, or science.
   c. interview, counsel, or advise such people as students, clients, or patients, in such matters as welfare eligibility, vocational rehabilitation, mental hygiene, or marital relations.
   d. evaluate engineering technical data to design buildings and bridges.

b. Specific vocational preparation:
   1. Over 2 years up to and including 4 years.
   2. Over 4 years up to and including 10 years.

c. Aptitude:
   1. Intelligence:
      a. the top 10 percent of the population.
   2. Verbal:
      a. the top 10 percent of the population.
      b. the highest third exclusive of the top 10 percent of the population.
   3. Numerical:
      a. the highest third exclusive of the top 10 percent of the population.
      b. the top 10 percent of the population.
   4. Spatial:
      a. the top 10 percent of the population.
      b. the highest third exclusive of the top 10 percent of the population.
   5. Form perception:
      a. the highest third exclusive of the top 10 percent of the population.
      b. the top 10 percent of the population.
   6. Clerical perception:
      a. the highest third exclusive of the top 10 percent of the population.
   7. Motor coordination:
      a. the highest third exclusive of the top 10 percent of the population.
   8. Finger dexterity:
      a. the highest third exclusive of the top 10 percent of the population.

9. Manual dexterity:
   a. the highest third exclusive of the top 10 percent of the population.
10. Eye-hand-foot coordination:
   a. the lowest 10 percent of the population.
11. Color discrimination:
   a. the middle third of the population.

d. Interests:
   1. Situations involving a preference for activities of a scientific and technical nature.
   2. Situations involving a preference for working for people for their presumed good, as in the social welfare sense, or for dealing with people and language in social situations.
   3. Situations involving a preference for activities resulting in prestige or the esteem of others.

e. Temperaments:
   1. Situations involving the evaluation (arriving at generalizations, judgments, or decisions) of information against sensory or judgmental criteria.
   2. Situations involving the evaluation (arriving at generalizations, judgments, or decisions) of information against measurable or verifiable criteria.
   3. Situations involving the necessity of dealing with people in actual job duties beyond giving and receiving instructions.

f. Physical demands:
   1. Sedentary work: Lifting 10 lbs. maximum and occasionally lifting and/or carrying such articles as dockets, ledgers, and small tools. Although a sedentary job is defined as one which involves sitting, a certain amount of walking and standing is often necessary in carrying out job duties. Jobs are sedentary if walking and standing are required only occasionally and other sedentary criteria are met.
   2. Light work.
   3. Reaching, handling, fingering, and/or feeling.
   4. Talking and/or hearing:
      a. talking: expressing or exchanging ideas by means of the spoken word.
      b. hearing: perceiving the nature of sounds by the ear.
   5. Seeing.

G. What are some pet care occupations not found in the above areas?

1. Dog catcher, dog warden: Captures and impounds unlicensed, stray, and uncontrolled animals: Snares animal with net, rope, or device. Places animal in cage of truck or fastens it to truck body. Drives truck to shelter. Removes animal from truck to shelter cage or other enclosure. Supplies food, water, and personal care to detained animals. Investigates complaints of animal bite cases. Destroys rabid animals as directed. Examines dog licenses for validity and issues warnings or summonses to delinquent owners. Destroys unclaimed animals, using gun, or by gas or electrocution.

Maintains file of number of animals impounded and disposition of each. May enforce regulations concerning treatment of domestic animals and be designated humane officer.

2. Dog trainer: Trains dogs to perform tricks, hunt, track, obey, protect life and property, run races or lead blind, evaluating behavior and performance of each dog: Studies characteristics of each breed to learn how dogs should be handled and to detect signs of sickness. Teaches dogs to perform duties or tricks by verbal command or signals. Directs dogs to perform tricks in circus ring or on stage. Rehearses dog, according to script, for motion picture or television film.

3. Dog-food dough mixer: Operates machines and equipment to mix ingredients to make straight and sponge (yeast) doughs according to formula: Moves controls and turns valves to adjust metering devices and to weigh, measure, sift, and convey water, flour, and shortening into mixer. Measures and dumps yeast, vitamins, yeast food, sugar, salt, and other ingredients into mixing machine. Turns knobs to set mixing cycle time and maintain temperature of dough. Starts machine. Feels dough for desired consistency. Dumps dough into trough. Pushes trough of sponge dough into room to ferment for specified time. Dumps raised sponge dough into mixer, using hoist, and adds ingredients to complete mixture. Records number of batches mixed. May dump all ingredients into mixer by hand.

4. Animal ecologist: Studies effects of environment on distribution, physical characteristics, behavior, and life history of animals: Examines factors, such as plant growth, rainfall, temperature, altitude, and sunlight, in relation to animal life.

5. Dog photographer: The dog photographer must be skilled in his profession; he must have endless patience, he must love dogs, enjoy people and be a great traveler. He should also have knowledge of the breeds and their Standards. There are always photographers at all dog shows. They photograph those who have won Best of Breed to Best in Show. Dog photography is difficult work: weekends are spent traveling and working at shows. When the photographer returns home he spends much of the week developing and mailing his pictures for which some of them have to meet publications deadlines. A career in photography can be interesting and financially rewarding. Professional training, experience and knowledge of dogs should be sought after high school graduation. You should enroll in a technical school, college or night school which has programs in photography. Observance of dogs and animals is very important. The future show dog photographer should attend dog events and kennels, and practice on the dogs.

6. Dog show judge: A dog show judge must perform the duty of evaluating the structure and gait of the dog. He must examine and measure each dog to its Standard. Then decide which dog comes closest to the Standard description. Some judges have only one or two breeds which they are licensed to judge: many judges are breeders which have many years of experience and knowledge of the breed, and usually are supported very well at a show. Other judges may be what they call "All Rounders" who judge every breed recognized by the AKC. Most judges ask to be covered for the expenses to and from the show. There are some judges who have had many years' experience in many breeds and receive money for their services. To be a judge requires long experience, knowledge of the breed to its greatest point and patience. The judging of dogs is interesting and rewarding but long hours in the ring under any weather conditions determines this profession a challenge. To apply for a judges license you must be over the age of twenty-one in good standing with the AKC and have experience in the breed or breeds which you are applying for. An application may be requested from the AKC. You must be able to list your personal statistics, answer why you wish to judge, and submit records of breeding and showing. You must also write something on the breed or breeds applied for, and you must be able to answer questions on the AKC rules and regulations.

ANIMAL CARE OCCUPATIONS

ANIMAL KEEPER
ANIMAL KEEPER, HEAD
ANIMAL MAN, HEAD
AQUARIST, AQUARIUM TANKMAN
DOG GROOMER-DOG BATHER-DOG BEAUTICIAN
DOG-HAIR CLIPPER
DOG-POUND ATTENDANT
KENNELMAN-DOG CARE MAN-DOG HANDLER
KENNEL MASTER
PET SHOP ATTENDANT
STABLEMAN-STABLEBOY
VETERINARY-HOSPITAL ATTENDANT

CROPPING, ANIMAL FARMING, GARDENING AND RELATED WORK

ANIMAL BREEDER
ANIMAL CARETAKER
CAT BREEDER
DOG BREEDER-DOG FANCIER-KENNEL KEEPER
RABBIT BREEDER-RABBIT FANCIER
REPTILE FARMER

MEDICAL, VETERINARY, AND RELATED WORK

LABORATORY TECHNICAN, VETERINARY
VETERINARIAN
VETERINARIAN, LABORATORY ANIMAL CARE
VETERINARY LIVESTOCK INSPECTOR

ADDITIONAL PET CARE OCCUPATIONS

DOG CATCHER-DOG WARDEN
DOG TRAINER
DOG-FOOD DOUGH MIXER
ANIMAL ECOLOGIST
DOG PHOTOGRAPHER
DOG SHOW JUDGE